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# Railway Age Gazette

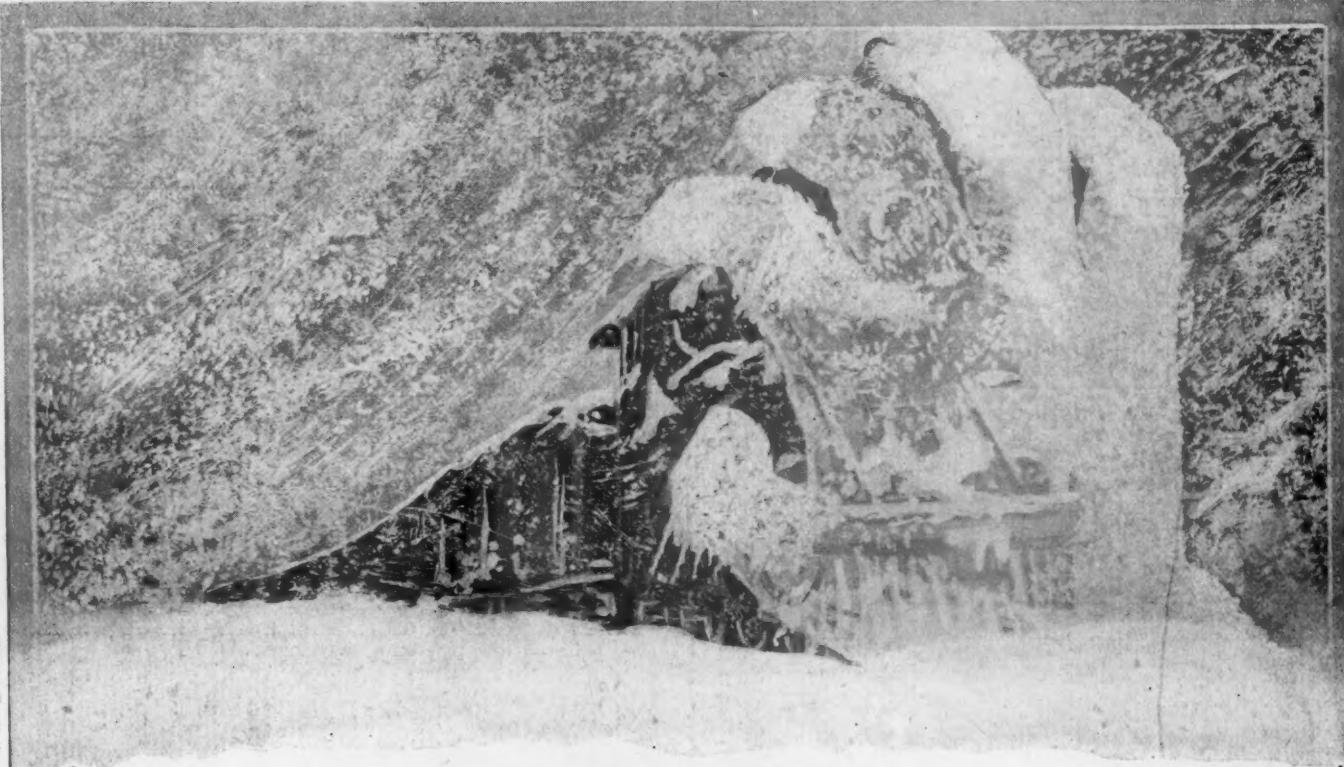
SECOND HALF OF 1917—No. 23

SIXTY-SECOND YEAR

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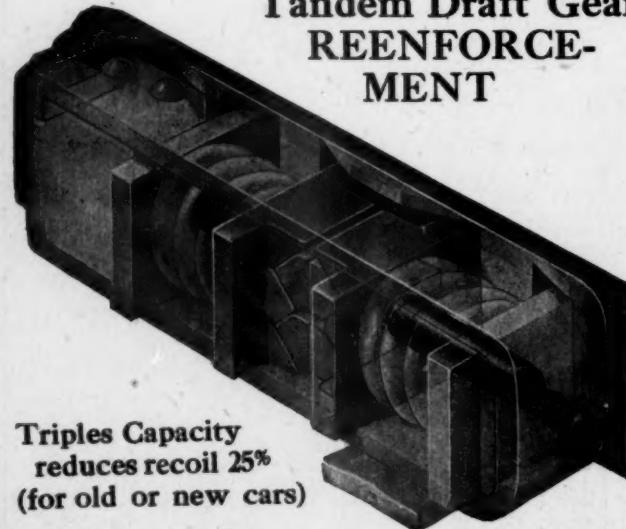
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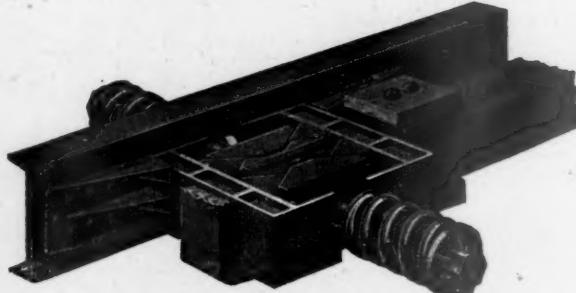
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# Railway Age Gazette

Volume 63

December 7, 1917

No. 23

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\*Illustrated.

The nine regiments of railway engineers that represent the American railways behind the lines in France are now less

**Our Engineers Win Praise at Cambrai** than six months old, but they are already making history and tradition for their organization. We quote from a despatch from Washington dated Monday last. "High tribute to the gallant

conduct of the American army engineers in France who were caught in the German encircling attack on the British lines near Cambrai, is paid in an official communication from the French government received here tonight by cable. The communication follows:

"We must remark upon the conduct of certain American soldiers, pioneers and workmen on the military railroad in the sector of the German attack west of Cambrai on November 30. They exchanged their picks and shovels for rifles and cartridges and fought with the English. Many died thus bravely, arms in hand, before the invader. All helped to repulse the enemy. There is not a single person who saw them at work who does not render warm praise to the coolness, discipline, and courage of these improvised combatants."

The president of the Association of American Railway Accounting Officers has issued a circular to members of the

**Interline Waybilling Urged** association urging each member to make a study of the unnecessary costs involved in the present system of intermediate inter-road rebilling. In

addition to the unnecessary labor involved in this system there is also a delay to freight cars. Railway executives should not only carefully consider the facts which their accounting officers will present to them if the recommendations contained in this circular of the Accounting Officers' Association are carried out, but they should themselves direct their accounting officers to make such an investigation immediately. There is a great waste in intermediate inter-road rebilling and this system of billing is a survival of competitive practices which are rapidly being abolished. It is a waste which there can be no real excuse

for even on an individual road as distinguished from all the railroads. Tradition and inertia are the explanation of the continuance of the practice. The executives and accounting officers should override this prejudice.

**Consolidating the Pennsylvania System** The Pennsylvania Railroad, which owns all of the capital stock of the Pennsylvania Company, is now to assume the obligations of the Pennsylvania Company and to take over the actual operation of the Northwest system of the Pennsylvania Lines West and dissolve the holding company—the Pennsylvania

Company—which now operates these lines. The vice-presidents of the Pennsylvania Company will become vice-presidents of the Pennsylvania Railroad, and while the organization will in a sense remain intact, it will actually become a part of the Pennsylvania Railroad organization and in time will presumably be as integral a part as one of the five grand divisions is now. Purely from an operating point of view this has distinct advantages. From a financial point of view the change made is at first sight one rather of form than of substance. All of the bonds and trust certificates of the Pennsylvania Company which are outstanding in the hands of the public are guaranteed by the Pennsylvania Railroad and are secured by the deposit of various forms of collateral. The elimination of the holding company would be of no importance except to substitute the credit of the Pennsylvania Railroad direct for this credit now one step removed by the interposition of the Pennsylvania Company. It would moreover bring the Pennsylvania Railroad one step nearer to the Pittsburgh, Fort Wayne & Chicago, which company owns the main line of the Northwest system from Pittsburgh to Chicago. This line is leased to the Pennsylvania Company and the lease is deposited under the Pennsylvania Company's first mortgage. There is no mortgage on the Pittsburgh, Fort Wayne & Chicago. The Pennsylvania Railroad's income account will be considerably benefited because the surplus of the Pennsylvania Company, after the payment of dividends to the Penn-

sylvania Railroad, has heretofore remained in the Pennsylvania Company's treasury and has therefore formed an equity only for the parent company. It will now go directly into the parent company's treasury as a part of operating income. This is a step toward simplification of the Pennsylvania system which should work out to the future benefit both of operation of the property and financing it.

Fifty per cent of the enormous number of freight-tracing telegrams now burdening the railroad telegraph and telephone wires all over the country are unnecessary; nearly 100 per cent of these messages are useless, so far as expediting the movement of freight is concerned; and this wasteful use of the

**Wasteful Use  
of the Wires**

wires is rapidly increasing. This is the substance of one of the significant paragraphs in the report of the convention of the Telegraph Superintendents' Association, published in the *Railway Age Gazette* last week, page 987. Sending letters by wire is a very old form of extravagance. Freight tracers are not the only abuse. The censoring that has been tried, here and there, during the last 20 years has worked temporary improvement, but no manager seems to have accomplished any sweeping or radical reform; or, if any has been accomplished, it is now swallowed up in the sea of war-conditions. We speak specially of the manager, for it seems quite plain that, to cut down the volume of telegraphing with appreciable and lasting effect, each general manager has got to stand, personally, very close to the man who actually uses the knife or the blue pencil. The committee has been instructed to send the association's resolution to the American Railway Association; which means, presumably, to the Railroads' War Board at Washington, as that body is in position to get immediate action on cutting out this unnecessary waste.

Some people are not satisfied with patriotism that is represented merely by service. They require a more violent mani-

**Patriotism** festation of it. The Washington Times publishes a daily column of para-

**Not Sufficiently** graphic comment which is rather bright and interesting, but which shows a

**Violent** cheerful disregard of logic. The other

day this column included an item on the action of the general operating committee of the eastern roads in ordering a discontinuance of the Pennsylvania's Broadway Limited train to enable the road to handle more freight. Asserting that the train "for some strange reason was not well patronized and did not pay very well," and that the New York Central's Twentieth Century Limited "runs crowded and pays well," the writer applauded "the patriotic withdrawal of a train that doesn't pay and the business-like continuation of a train that does pay." All of which was "spoke sarcastic." What the Washington Times meant to imply, we assume, was that true patriotism would take off the trains that pay best, and leave on those which don't pay at all. But it happens that those which pay best are the ones on which the most people ride. That is why they pay best; and the better a train pays, the more people would be inconvenienced by cancelling it. It follows, according to the logic of the Washington Times, that the patriotic duty of the railways requires them to inconvenience as many people as possible. The Washington Times also advocates government ownership, doubtless considering it the most effective means available for accomplishing the purpose of inconveniencing the public. Ever since the railroads announced they would give up their competitive activities during the war many people have raised, as a sort of test of good faith, the question whether the Pennsylvania would give up its

Broadway Limited. We have not heard that the Pennsylvania management has applied for a medal for its action, but possibly it could best demonstrate its patriotism in the eyes of its critics by abandoning service altogether. This would accomplish its patriotic duty, as the *Washington Times* sees it, very completely.

**THE NEW ENGLAND RATE HEARING**

THE plan followed in the conduct of the recent hearing at Boston in the New England rate advance case has made a very favorable impression upon railroad officers and others who were present. One reason for favorable comment was the fact that the commission sent a New England man, the recently appointed commissioner, George W. Anderson, to take the testimony on the ground, instead of sending an examiner or instead of requiring the witnesses to go to Washington. Another was that the railroad or public utility commissioners of the six New England states were not only invited but urged to be present at the hearing and sit jointly with Commissioner Anderson.

Still another source of gratification was the attitude of the commissioner himself, who refused to allow the proceedings to be delayed or encumbered by attorneys representing organizations or individuals who had no direct interest in the matter involved. For example, he told the representative of the minority stockholders of the Boston & Maine that they had had their day in court and that a rate hearing was no place for them to appear. We understand that he also kept out several of the kind of "cranks" that frequently appear at hearings of this kind and who have frequently been treated with too great forbearance by the commission. The commission has often allowed its time to be wasted by witnesses who represented nothing but a desire to advertise their own ignorance.

Now that the commission has been increased in membership and allowed to organize itself more efficiently it is to be hoped that it will be able to return to its former practice of having important hearings more often conducted by commissioners.

The plan of holding joint hearings with the state commissioners is also a good one, especially in the absence of sufficient authority in the federal commission to prevent its decisions being to an extent nullified by state action. In his testimony in the recent supplemental fifteen per cent case before the commission President Willard of the Baltimore & Ohio said his company had not yet received the full benefit of the advance allowed by the decision of June 27 because two of the states through which it operates had refused to allow the advance in intrastate rates. Similarly the value of any decision the federal commission might make in New England could be greatly reduced by the various state commissions. Commissioner Anderson apparently made a special effort to emphasize this point during the hearing at Boston.

The plan of co-operation with the state commissions has been strongly advocated by the Interstate Commerce Commission as a means of avoiding the frequent conflicts of authority, and in its annual report it repeats its recommendation that without abdication of any federal authority finally to control questions affecting interstate and foreign commerce the commission be expressly authorized to co-operate with state commissions in the effort to reconcile upon single record the conflicts between state and interstate rates.

The commission has adopted the plan of holding joint hearings with state commissions in half a dozen cases during the past year and in its report it expresses the hope that the plan will prove effective. We believe the only really effective way to accomplish the desired result would be to give

the federal commission exclusive jurisdiction over the rates of carriers subject to its authority, but until this has been done, the commission's plan represents a desirable attempt toward a compromise.

## TWO THINGS THE GOVERNMENT SHOULD DO

*[The following editorial was written and put in type before the Railway Age Gazette had the slightest intimation that the Interstate Commerce Commission was going to make its special report to Congress recommending the principal action by the Government below advocated, viz.: the suspension during the war of the Sherman anti-trust law and the anti-pooling law. The Commission mentions as an alternative plan operation of the railways by the President, but as Commissioner McChord says in his minority report, the majority report takes the position, at least by implication, that this unification may be effected by the carriers and it is clearly apparent from what the majority of the Commission says that it favors leaving the operation of the railroads in the hands of their own managers rather than operation by the President.]*

**T**HREE are two things which it is extremely desirable the government should do as soon as practicable in order to enable the railways, and especially those in eastern territory, to better meet the enormous and increasing demands which are being made upon them.

First, it should appoint a government traffic manager. The government is today the largest shipper in the country. Every large industrial concern has a traffic manager in whose hands it places the work of dealing with the carriers in the handling of the shipments of all the departments and all the branches of its business. The government should have a man or men to do similar work for it.

At the present time all the departments of the government directly concerned with carrying on the war, and thousands of concerns which are working on government contracts, are permitted to put markings upon their shipments requiring that they be given preference in movement. The result is that a vast tonnage is moving under these preference orders; and this is one of the main causes of the congestion of the lines and terminals of the eastern railroads. When a railway, which is working close to the limit of its capacity, tries to give preferred movement to the bulk of its traffic it soon gets blocked and unable to give satisfactory movement to anything. Instead of some traffic being speeded up, all traffic is slowed down.

The government, having appointed its traffic manager, should give him complete authority to determine the order in which preference should be given to the movement of every kind of freight being handled for all government departments and all government contractors. The volume of the shipments made directly or indirectly on government account will steadily increase as the war goes on, and unless authority to control their movement is concentrated somewhere the present confusion, delays and congestion will be aggravated. Not all the freight that is being shipped directly or indirectly on government account is equally preferred. Some of it is "first preferred," some "second preferred," and so on; and it is for the government through its own representatives, not for the railroads, to determine the order in which preference should be given.

The second thing referred to, which the government ought to do at once as a necessary means of enabling the railways to handle the maximum possible traffic, is to repeal, or at least to suspend for the period of the war, the Sherman anti-trust act as it applies to the railways; the law giving the shipper the right to route his freight; and the anti-pooling section of the Act to Regulate Commerce.

It has been repeatedly asserted in the press that the plan adopted by the Railroads' War Board to relieve the freight congestion on the eastern lines is illegal, being especially in violation of the anti-pooling section of the Act to Regulate Commerce. Chairman Harrison of the Railroads' War Board issued a statement in the latter part of last week, denying this charge. The anti-pooling section prohibits the pooling of freight traffic or earnings. Mr. Harrison pointed out that if the word "pool" is applicable, what the War Board is pooling is merely the physical facilities, as what it is doing is to cause such common and joint use of the facilities of different lines, and such diversion of freight from the more congested to the less congested lines, as is necessary to enable them all to handle the maximum amount of traffic practicable.

This is all true enough. But it calls attention forcefully to a situation which, for the welfare of the nation, Congress ought at once to change. Much can doubtless be accomplished by the measures which the War Board is now adopting. But before the war is over, pooling, not merely of physical facilities, but of traffic and earnings, may and probably will be necessary to enable the eastern lines, and perhaps those of other territories, to render all the service the government and the public will need.

In order to handle the maximum traffic possible it is necessary that the railways should be free to route any or all kinds of it over the lines and through the gateways which, at any particular time, are most able to handle it. But to do that they must be able freely to divide the traffic among themselves; to divide the traffic, and at the same time reasonably protect the interests of all the individual lines, they must be able to arrange, and freely to change arrangements, for securing to each line the part of the total earnings to which it is entitled for the services which it renders to railway patrons and to other railways. With the existing laws standing in the way, the railways cannot legally make the arrangements necessary to enable them to move the maximum traffic which is practicable.

What would the public lose by suspending the laws mentioned for the period of the war, or even repealing them altogether in so far as they affect railways? Absolutely nothing. The Sherman act and the anti-pooling laws were intended principally to prevent combinations between railways which would result in the fixing or the maintenance of unreasonable rates. Under legislation since passed by Congress, neither a single railway nor any number of railways can advance a single interstate rate without the express consent of the Interstate Commerce Commission; and similar legislation also has been passed in most of the states regarding advances in state rates. Since the laws in question have no effect on rates, the only influence they exert is on service. The influence they exert on service only intensifies competition; and under present conditions the more competition in service there is, the worse the situation grows. Competition in service results in traffic being routed over indirect routes when it should be routed over direct ones; in trains being kept on which should be cancelled; in some roads getting more business than they are able to handle and in others getting less than they are able to handle; all of which reduce the amount of business which the railways as a whole can handle.

Competition in service may or may not be desirable under normal conditions. But the existing conditions are entirely abnormal. There is only one transportation question which is worth while considering during the war. That is, how may the railways be enabled to handle the government's and the public's business? One of the most important steps which could be taken toward enabling them to do this would be to remove all the obstacles legislation has placed in the way of their working together as a single system.

## A WORLD-WIDE TENDENCY TOWARD HIGHER RATES

THE suggestions by Clifford Thorne and others that an increase of freight rates might be avoided by having the government take over the railroads are rather amusing in view of the increases in rates which have been put into effect or are under serious consideration in other countries where the governments either own the railroads or have practically taken them over during the war.

We publish in this issue a translation of an article from the *Economiste Francais*, which describes the plan recently proposed by the French government itself for a general 15 per cent increase in rates on the larger systems of France to meet the deficits, for which the government has assumed responsibility, caused by increases in wages, prices of fuel and materials and expenses of all kinds. The article shows that these unprecedented rises in operating costs are by no means confined to the United States or even to the United States and France, but that they are the result of conditions in effect in all parts of the world. It also shows that in every case the remedy for this condition proposed or adopted has been the same. In many countries increases in rates were found to be necessary even before the war and since then, the article says, "the terrible conflict which has overturned economic life not only in the belligerent countries, but in the neutral as well," has forced an increase in rates in nearly every country which has any considerable railway system.

In Italy the rates, increased in 1911 and in July, 1914, were raised twice in 1916. In Switzerland passenger fares have been increased and now preparations are being made to follow the same course as to freight rates. In Russia rates have been undergoing increases since 1902 and since the war the government has placed taxes on transportation in such a form as practically to increase the rates. In Holland passenger rates were increased in 1909 and freight rates in 1916. In Norway rates were increased in 1913, 1915 and 1916 and a similar plan has been followed during the last three years. In Austria-Hungary freight rates were recently increased 30 per cent and even in Prussia the minister of railways has submitted to the Railway Council a proposal for a 10 per cent increase in passenger fares. Canada, Argentina and Denmark are also mentioned as countries where rates have been advanced to offset the increases in expenses.

The efforts of the railroads of the United States to increase their revenues by a higher scale of charges cannot be ascribed solely to an inordinate greed for profits. They are subject to a condition which is world-wide in its effect and they are seeking to meet that condition in the only way which is open to them, that of seeking permission to do what other kinds of business have done without requiring any permission.

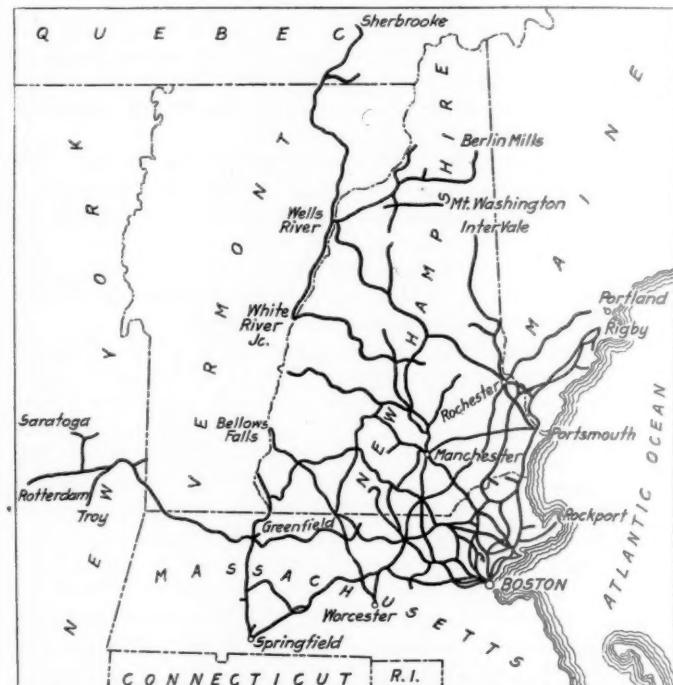
### BOSTON & MAINE

JAMES H. HUSTIS, receiver of the Boston & Maine, in his statement before the Interstate Commerce Commission in the hearing on the 15 per cent rate case, drew a remarkably vivid and convincing picture of railroad conditions in New England, and more especially conditions on the Boston & Maine. He estimated that for the 1917 calendar year there would be an increase over 1916 in expenses of approximately \$10,100,000, of which \$4,100,000 would be in fuel cost and \$2,900,000 in wages, the remainder representing the higher costs of materials and the higher payments for car hire. He also dwelt briefly, but none the less impressively, on the need for the expansion of facilities of the Boston & Maine.

It is well known that during the years that Mr. Hustis was on the Boston & Albany he not only added immensely to the capacity of the plant through improved organization

and methods, but he carried out a very comprehensive plan of rehabilitation. During most of the years that Mr. Hustis was on the Boston & Albany the Boston & Maine was almost standing still. After the New Haven got control, considerable sums of money were spent for additions and betterments, but there is much that needs to be done now. If Mr. Hustis could have the necessary money, and supplies were obtainable at anything like reasonable prices, he could solve the transportation problem of the New England territory served by the Boston & Maine; and just as the Boston & Albany was immensely increased in value, but at the same time itself added an incalculable amount to the wealth of the territory it served, so if the Boston & Maine could be comprehensively developed it would add immensely to the wealth of the community served.

In the fiscal year ended June 30, 1917, total operating revenues of the Boston & Maine amounted to \$56,992,000, an increase over the previous year of \$4,917,000. Operating expenses amounted to \$42,448,000, an increase of \$6,250,000. After allowing for interest charges, rentals, etc., there was only \$1,880,000 left in 1917 as against \$4,066,000 in the fiscal year 1916. The immediate hopes of a financial



The Boston & Maine

reorganization of the Boston & Maine without sacrifice on the part of security holders, either of the parent company or leased companies, have been knocked into a cocked hat through no failure on the part of the Boston & Maine organization to work to the full for economies; and this work has been successful if measured in terms other than dollars and cents.

The tons of freight carried totaled 30,925,000, an increase over the previous year of 6.49 per cent. The average revenue trainload was 374 tons, an increase of 3.22 per cent, and the average loading per loaded car was 18.23 tons, an increase of 7.30 per cent. The Boston & Maine is more like the New Haven than like most other roads in the relation between passenger business and freight business. Out of a total operating revenue of nearly \$57,000,000, passenger service and service incidental thereto furnished about \$23,000,000. Economies in passenger service, therefore, bulk larger in proportion to total expenses on the Boston & Maine than they do on most roads. The total number of passengers carried in 1917 was 47,377,000, an increase over the previous year of 11.43 per cent, the average length

of journey remaining about the same—18.81 miles. The number of passengers per train-mile was 75.56, an increase of 8.66, and the number of passengers per car-mile was 21, an increase of 7.69.

These figures showing what is being accomplished under very extraordinary labor conditions are in striking contrast to figures showing expenses. The average cost of coal per gross ton on the tenders was \$4.47 in 1917, an increase of 36.70 per cent; and it must be remembered that the first half of the fiscal year showed comparatively small increases in coal cost per ton. Maintenance of way cost \$6,415,000, an increase of 7.15 per cent; maintenance of equipment, \$7,881,000, an increase of 19.63 per cent, and transportation, \$26,075,000, an increase of 19.93 per cent. The following table shows the percentage of each class of operating expenses to total operating revenues in 1917 and 1916:

	1917	1916
Maintenance of way and structures.....	11.3	11.5
Maintenance of equipment.....	13.8	12.6
Traffic expenses .....	.7	.8
Transportation expenses .....	45.8	41.8
Miscellaneous operations .....	.5	.4
General expenses .....	2.4	2.4
Total .....	74.5	69.5

The Boston & Maine is making such additions and betterments as are most immediately essential. In 1917 there was \$3,113,000 net spent for additions and betterments, which included \$1,821,000 for equipment, less \$575,000 for equipment retired. The Boston & Maine badly needs new equipment, but how difficult the situation is is indicated by the fact that when the company made inquiries as to the duplication of an order of 60 locomotives the tentative price was fixed at just twice what had been paid when the original order was delivered in the previous winter.

The Boston & Maine had cash on hand, time deposits, etc., of \$7,964,000, which included overdue interest, etc., of \$2,088,000. Loans and bills payable amounted to \$18,306,000.

Mr. Hustis has the reputation of being able to build up a fine organization with a high esprit de corps both among officers and employees. The tone of the following, which is the concluding paragraph in his annual report for the 1917 fiscal year, gives some indication of why possibly he has that reputation:

"The disturbed labor conditions, heretofore referred to, that have existed throughout the year do not make for the kind of loyalty and esprit de corps that will produce the best results for the railroad or for the public. It is proper, however, that the thanks of the management should be extended to those officers and men who, by their faithful performance of duty throughout the year, made possible the safe running of millions of train and engine miles. It means constant watchfulness and intelligent co-operation on the part of those who man the trains, care for the tracks, repair the locomotives and the cars, and operate the signal towers. The men and women at the stations and in the offices, whose duties are exacting and laborious, are also deserving of recognition. Thanks are expressed to all who have contributed to the results that have been achieved during the year."

The following table shows the principal figures for operation in the fiscal year ended June 30, 1917, compared with the fiscal year 1916:

	1917	1916
Average mileage operated.....	2,305	2,305
Freight revenue .....	\$33,909,489	\$31,963,489
Passenger revenue .....	16,878,757	15,028,317
Total operating revenues.....	56,992,040	52,075,428
Maintenance of way and structures.....	6,414,842	5,986,603
Maintenance of equipment.....	7,881,110	6,588,044
Traffic expenses .....	426,841	421,797
Transportation expenses .....	26,076,407	21,742,534
General expenses .....	1,363,339	1,238,292
Total operating expenses.....	42,448,077	36,197,958
Taxes .....	2,123,477	1,986,267
Operating income .....	12,419,251	13,888,578
Gross income .....	13,585,106	15,059,293
*Net income .....	1,880,449	4,065,691

\* After making deductions for interest, some of which was not actually paid.

## Letters to the Editor

### RECOMMENDS CREATION OF SERVICE DEPARTMENT ON RAILWAYS

NORFOLK, VA.

TO THE EDITOR OF THE RAILWAY AGE GAZETTE:

For some time I have considered suggesting the creation of a new department on railways, to be known as the "department of service." Service is of paramount importance in an organization and my past experience leads me to believe that if the railways made it the business of some one department to see that service of the highest order was rendered, much criticism directed against the carriers would disappear.

The present organization on most lines does not provide a clearing house where important matters can be sifted and reduced to concrete form for the information of the president and the board of directors. A department with a competent, responsible head, therefore, would fill this need and result in a saving in expense and in added efficiency in service to the public, which cannot be overestimated. After 30 years' experience in railroad work I am firmly convinced of the need of the further application of business principles to the operation of our railways, and to this end I suggest the creation of a business department the organization and duties of which are outlined as follows:

#### DEPARTMENT OF SERVICE Organization

Executives—	Statistical Bureau—
1 Vice-president.	1 Statistician.
1 Assistant to vice-president.	1 Assistant statistician.
1 Chief clerk.	4 Clerks.
1 Assistant chief clerk.	3 Stenographers.
6 Clerks.	1 File clerk.
3 Stenographers.	—
1 File clerk.	10 Labor Bureau—
1 Assistant file clerk.	1 Negotiator.
1 Messenger.	1 Assistant negotiator.
16 Inspection Bureau—	1 Clerk.
1 Chief inspector.	1 Stenographer.
1 Inspector, maintenance of way.	4 Summary—
1 Inspector, maintenance of equipment.	16 Executives.
1 Inspector of transportation.	13 Inspection bureau.
1 Chief clerk.	10 Statistical bureau.
3 Clerks.	4 Labor bureau.
3 Stenographers.	—
1 File clerk.	43 Total number of officers
1 Messenger.	and employees.

#### OUTLINE OF WORK

1. *Expenditure Supervision*—  
(a) Allotments to departments and sub-departments on monthly expenditure.  
(b) Supervision over all new-work expenditures.  
(c) Audit of vouchers and payrolls.
2. *Efficiency Methods*—  
(a) Analysis of present practices and methods.  
(b) Improvements in methods and practices.  
(c) Reduction in waste and non-essential methods and operations.
3. *Vital Statistics*—  
(a) Elimination of all except important statistics.  
(b) Issue of vital set of statistics to each department and sub-departments.  
(c) Comparative statistics of other roads.
4. *Organization Outlines*—  
(a) Establishment of organization and lines in various departments and sub-departments.  
(b) Co-ordination of organizations in various departments.  
(c) Co-ordination in all departments.
5. *Reports and Records*—  
(a) Establishment of standard reports and records.  
(b) Elimination of unnecessary reports and records.  
(c) Use of reports and records.
6. *Labor Adjustments*—  
(a) Analysis of schedules and comparison with other lines.  
(b) Grievance adjustments.  
(c) New schedule matters.
7. *Analysis of Results*—  
(a) Concrete analysis of operating results.  
(b) Comparative analysis with other lines.  
(c) Fixed standard to be attained in operation.

8. *Foreign Relations*—
  - (a) Cultivation of friendly relations with connecting lines in all departments.
  - (b) Analysis of methods used on foreign lines.
  - (c) Co-ordination of operation at common points with other lines to eliminate waste.
9. *Publicity Matters*—
  - (a) Determination of extent of advertising and its results.
  - (b) Co-operation with federal, state, municipal and other officers to create friendly relations.
  - (c) Education of the public on railway matters.
10. *Recommendations*—
  - (a) Résumé of past month's operations with comments and explanation.
  - (b) Monthly reports for all departments on program for succeeding month with recommendations on important operating matters.
  - (c) Monthly meetings of heads of departments and sub-departments for general discussion of vital matters relating to company's interests.

L. C. FRITCH,

General Manager, Seaboard Air Line.

## GIVE THE EXPERT A SHOW

CHICAGO, ILL.

### TO THE EDITOR OF THE RAILWAY AGE GAZETTE:

Discussions on the opportunities afforded by railroads for the man who would succeed always seem to arrive at the same point—that a fellow should get a job with the road that will give him a chance to be a division superintendent, no matter with what department he may receive his preliminary training. This conclusion is founded on the proposition that, to become a general manager or executive officer, one must have attributes that befit a division superintendent. As a result a man whose bent is scientific rather than executive, who is better suited to be a specialist than a generalist, will find himself in a blind alley in a short time. Thus the mechanical engineer, the bridge engineer, the signal engineer, the engineer of tests, the engineer of design, the fuel engineer, the engineer of wood preservation and others, no matter how expert in their individual fields, are doomed always to remain such with emoluments measured entirely by the importance of their positions on the particular roads which employ them, save in the remote case where in addition to attributes making them valuable in their present position, they are executives of such exceptional merit that they may aspire to such positions as chief engineer or superintendent of motive power. However, their chances for this line of promotion are small because the division engineer and the division master mechanic are receiving training much better suited to develop them for the executive positions of the departments.

A lack of opportunities for the boss naturally holds down his subordinates and in consequence the sub-department of the specialist frequently suffers the stagnation under which poor men hang on and the good ones rot unless they have sense enough to quit or are fortunate enough to get fired, or, except for the opportunities which occur only at rare intervals when a vacancy actually appears at the head of the department itself.

The writer is familiar with the bridge department of a large road which we will say is in the southwest because it is not. For the last 15 years this road has undergone extensive growth and has built many more new bridges and other structures than would be built by a road merely making the current renewals. In consequence its drafting room force has been large. It has also enjoyed a reputation for high grade work, has been a leader in the development of modern construction practice based on scientific methods and has recruited its men from the best of the technical graduates or from men experienced in the drafting rooms of bridge companies. In view of this the personnel of its drawing room has ranked as high as any similar organization in the country. Obviously this railroad has had little opportunity to advance these men, with the inevitable result that the better ones quit when they perceive that they have reached the limit of advancement. Many of these men have subsequently achieved success in other lines.

Selecting from this group at random we find that two of them are now contracting engineers for large bridge companies; three are structural engineers in private practice; three are efficiency experts; two are civil service administrators and three are consulting public utility experts. These men have made their way and are at present in positions which in most cases pay as much or more than the salaries paid by railroads to bridge engineers. Thus we see that the service of a group of able men was lost not only to the road that trained them but to all other railroads as well, for, to the best of my knowledge, only two men who were employed in responsible positions in this bridge office are now serving as bridge engineers of other railroads and in each of these cases the man secured his position through an acquaintance antedating his employment with the road in question.

The example cited above is not entirely a peculiar one. Other large railroads are also training men for positions not only in the bridge department but in other technical departments as well. Technical work on railroads naturally attracts good men. It is interesting and the training is valuable but almost invariably the man finds he must look elsewhere for promotion. In the case of the small road the situation is somewhat different. The work is on a much smaller scale and in less variety and in consequence does not afford as broad a training, while, as the department is small, it offers less of a selection from which to pick a department head than on the large railroad.

This suggests a solution—a freer exchange of men between railroads or, to put it more specifically,—the recruiting of bridge engineers, engineers of tests, etc., for the smaller roads from subordinate positions on the larger ones and also the advance of the expert from one road to another as his work demonstrates his capacity for the position on the road of larger activities.

To a certain extent this practice is being carried out at the present time but only in a more or less haphazard fashion, limited by the extent to which the technical men on one road become known to those on another and almost entirely without any attempt at co-operation between the railroads. Development of this idea is also restricted by the fact that its objections receive greater notice than its advantages. The bringing of a man from another road has a tendency to discourage the subordinates who may have had reason to believe that they were in line for promotion. This objection is valid where the road in question has had an opportunity to build up an efficient organization in the particular department. The objection, however, is not nearly so clear in the case of a small road where the staff of the expert consists of only one or two men. For their own good the subordinates in such a case owe it to themselves to seek a broader experience elsewhere, for the small road, with its limited organization and direct contact between the minor subordinates and executive officers, is much better suited to the development of the all-around executive than the expert. In conclusion, and with reservation for such limitations as have been mentioned, the suggested exchange of men would have the advantage for the large road that its organizations would be kept alive through the more rapid advance of the men, while the smaller roads would secure men who have had a broader and more diversified experience. In general, an advantage would arise from the free exchange of ideas, practices and methods which such a system would bring about.

### TECHNICAL.

SCRAP METAL IN 1916.—A report of the United States Geological Survey shows that in 1916 the total quantity of scrap metal of various kinds recovered in the United States was valued at \$265,377,856. This was more than double the value, and represented nearly double the quantity of scrap metal recovered in 1915.

# The Commerce Commission's Annual Report

## A Review of Its Activities During the Year and Those of Its Bureaus and Divisions. No New Recommendations

**N**O new recommendations are contained in the 31st annual report of the Interstate Commerce Commission to Congress, covering the year ended October 31, 1917. The commission repeats several recommendations made and explained in previous reports, including those for legislation to give it authority to co-operate with state commissions in rate matters, to provide control over railway capitalization, to require the standardization of operating rules and to prohibit trespassing, but the greater part of the report is devoted to the routine record of the work of the commission and its various bureaus and divisions. It also includes a general discussion of transportation conditions, particularly as they have been affected by the war, in which it says, in part:

### TRANSPORTATION CONDITIONS

Since 1907 there were few times when the number of freight cars available did not exceed the number required for the transportation of the country's commerce. It is true that, owing to the uneven distribution of cars over the various roads, there were occasional periods when the needs of one locality or another were in excess of the cars immediately available, but throughout this period the total number of freight cars available as a rule considerably exceeded the number required. As a result of this condition there was slight incentive to acquire additional equipment, and on many lines the idle cars were allowed to deteriorate.

These conditions continued for some time after war began in the summer of 1914, and while there was great congestion at the Atlantic ports during 1915 the number of cars available in that year exceeded the demand. The number of idle cars was, however, steadily declining, and by the fall of 1916 car shortage had become acute.

Through the railroads' Commission on Car Service efforts have been made to relieve the difficulties resulting from car shortage and congestion. It has co-operated with the various governmental agencies, and through those efforts substantial increase in efficiency of available transportation facilities has been secured, and car shortage conditions in different localities have been improved by requiring railroads to haul thereto empty cars which were not so badly needed elsewhere.

Without attempting to detail the activities on the part of the railways through this organization it will suffice here to say that they have responded to and supported the executive committee, which in an earnest way has attempted to deal with the vexatious and troublesome questions and to meet the unprecedented demands upon the railways.

The commission has since undertaken to regulate car service throughout the United States through its Bureau of Car Service. Where occasion requires, orders or directions will issue under the car service act and directly to the carrier or carriers concerned. Subject to this fundamental principle, the commission is availng itself, and will continue to avail itself, of co-operative effort on the part of the carriers' commission on car service. The latter has a large force of assistants under its control both in Washington and in the field. The present is peculiarly a time for the avoidance of unnecessary expense and duplication of work, and it has seemed to this commission desirable to utilize to the fullest extent all means for insuring maximum efficiency in the handling of cars. The work of the bureau is steadily growing in volume, and its organization is being built up as demands require.

Transportation conditions have been abnormal throughout the entire country during the past year. A condition of extreme congestion has obtained in the territory north of the Ohio and Potomac rivers and east of the Indiana-Illinois state line, the workshop of the country, to which the raw materials of the south and west, together with the food products of those sections, naturally gravitate.

Even before our country was drawn into the war the railroads were handling an extraordinarily heavy traffic, heavier by far than at any time in their previous history. This was greatly increased by the war, and as that began in the spring, when the fuel and crop movement is normally light, transportation conditions during the past summer have probably been better than if our war activity had been thrust upon the carriers during the height of the fall or winter traffic movement.

The adoption by the carriers of new rules regulating the distribution of cars as between themselves and the enactment of the Esch car service act have already been mentioned. In this way equipment has been taken from sections where it was less needed to other sections, where military and commercial needs required more equipment than was available, and such stupendous movements as those of the cantonment construction material and the troop transfers have been made without seriously interfering with the commercial business of the country.

While conditions have been extraordinary and while traffic has not always moved as carriers and shippers would have had it moved, the essential needs of the country have to date been cared for. Much was said during the past winter as to the danger of freezing and famine on account of failure adequately to transport fuel and foods, but history will record no such calamity.

Conditions have now reached the point where it has become imperative under the power of the transportation priority act, approved on August 10, 1917, to effect priority in transportation for certain traffic necessary to the national security and defense. The first step taken in this direction was to insure to the upper lake states an adequate supply of coal for the coming winter. More recently the use of open-top cars suitable for the transportation of coal and commodities necessary in the metal, sugar, and fertilizer industries has been denied for the transportation of other commodities not essential in the nation's present emergency. It is to be expected that similar and broader action of this sort will be necessary in the near future.

In the work of distributing empty cars to producing sections of the country, taking care of emergencies arising on particular lines or in particular sections, the Bureau of Car Service is working with the Commission on Car Service, as before indicated.

The co-operation of the shippers and carriers is worthy of especial note. The volume of business being offered to the carriers for transportation materially exceeds the assimilating ability of the transportation instrumentalities. Owing to the demand upon car and locomotive building plants for equipment for use abroad, both by our own forces and by our allies, and to the unprecedented difficulty of securing labor and material, it is impossible at the present time for these plants to do much more than replace the equipment worn out in service in the United States. It is apparent that the solution of the car service problem until such time as additional equipment and facilities can be provided lies in securing the maximum use of those already existing. This

commission is co-operating with the transportation priority director, the food administrator, and the fuel administrator, agencies appointed by the President to assist in carrying forward the conduct of the war.

#### OPERATING INCOME OF RAILWAYS

The accompanying table gives a statistical review of railway operations since 1891. Notwithstanding the unreliability of book values as a statement of investment, especially in the earlier years, and the changes in accounting requirements which affect the comparability of statistics, the

6.35. For 1917 the table this year gives an estimate of 6.5 per cent.

A condensed abstract of the report, outlining the principal activities for the year, follows:

#### ABSTRACT OF REPORT

The number of formal complaints filed during the year was 651, a decrease of 203 as compared with the previous year; 746 cases have been decided and 106 have been dismissed by stipulations or on complainant's request, making a total of 852, as against 806 during the previous year.

ANALYSIS OF OPERATING INCOME OF RAILWAYS IN THE UNITED STATES, JULY 1, 1890, TO JUNE 30, 1917, INCLUSIVE, AND COMPARISON OF SUCH INCOME PER MILE OF ROAD, ETC., WITH BOOK COST PER MILE OF ROAD, ETC.

Year. ended June 30.	Results of operation.										Book cost of road and equipment.	Number of miles of road represented.	Average book cost of road and equipment per mile of road.	Ratio of column (j) to column (m).	Average freight revenue per ton-mile.
	Operating revenues.	Operating expenses.	Oper- ating ratio.	Taxes.	Income from operation.	Number of miles operated (including trackage rights).	Ratio of mileage oper- ated under track- age rights to mileage with track- age figures omitted.	Average income per mile operated (track- age being in- cluded in di- visor).	Average income per mile operated, adjusted to elimi- nate effect due to dupli- cation on account of track- age.	(k)	(l)	(m)	(n)	(o)	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
1891.....	\$1,096,761,395	\$731,887,893	Per et.	66.73	\$33,280,095	\$331,593,407	181,275,17	Per et.	2.43	\$2,056	\$2,106	\$8,738,533,165	Miles.	Per et.	0.895
1892.....	1,171,407,343	780,997,906	66.67	34,053,495	355,355,852	152,337,30	2.49	2,194	2,249	8,554,394,830	143,516,64	\$55,675	3.77	.898	
1893.....	1,220,751,874	827,921,299	67.82	35,514,689	356,315,886	159,779,84	2.49	2,099	2,151	8,937,545,760	161,258,07	55,424	3.88	.878	
1894.....	1,073,361,797	731,414,322	68.14	38,125,274	303,822,201	175,690,96	2.44	1,729	1,771	9,073,470,532	154,008,71	55,323	3.20	.850	
1895.....	1,075,371,462	725,720,415	67.49	39,832,433	309,818,514	177,746,25	2.47	1,743	1,786	9,203,490,619	167,741,38	54,867	3.26	.833	
Total....	5,637,653,871	3,707,941,925	67.37	181,805,986	1,657,905,960	846,880,52	2.46	1,958	2,009	2,35,778,901,741	639,524,80	56,210	3.57	-----	
1896.....	1,150,169,376	772,989,044	67.21	39,970,791	337,202,541	181,982,64	2.66	1,853	1,902	9,500,327,733	173,880,12	54,644	3.48	.803	
1897.....	1,122,089,773	752,524,764	67.06	43,137,844	328,427,165	183,284,51	2.75	1,781	1,830	9,702,322,228	174,673,22	55,586	3.29	.798	
1898.....	1,247,325,621	817,973,276	65.58	43,828,224	385,524,121	184,648,28	2.99	2,088	2,150	9,760,581,424	170,030,03	57,395	3.75	.753	
1899.....	1,313,610,118	856,968,999	65.24	46,337,632	410,303,487	187,534,68	2.92	2,188	2,252	9,931,840,805	177,638,53	56,079	4.02	.724	
1900.....	1,487,044,814	961,428,511	64.65	48,332,273	477,284,030	192,556,03	3.04	2,479	2,554	10,263,313,400	181,437,01	56,567	4.52	.729	
Total....	6,320,239,702	4,161,884,594	65.85	221,605,764	1,933,748,344	930,005,86	2.87	2,083	2,143	49,195,392,500	877,668,97	56,052	3.82	-----	
1901.....	1,588,526,037	1,030,397,270	64.86	50,944,372	507,184,395	195,561,92	2.95	2,593	2,670	10,405,025,085	182,734,04	56,941	4.69	.750	
1902.....	1,726,380,287	1,116,248,747	64.66	54,465,437	555,666,083	200,154,56	2.76	2,776	2,853	10,658,321,376	187,442,35	56,882	5.02	.757	
1903.....	1,900,846,907	1,257,538,852	66.16	57,849,569	585,458,486	205,313,54	2.96	2,852	2,936	10,973,504,903	193,823,01	56,616	5.19	.763	
1904.....	1,975,174,091	1,338,896,253	67.79	61,696,354	574,581,484	212,243,20	3.23	2,707	2,794	11,511,537,131	198,841,19	57,833	4.83	.780	
1905.....	2,082,482,406	1,390,602,152	66.78	63,474,679	628,403,575	216,973,61	3.61	2,896	3,001	11,951,348,943	203,228,07	58,808	5.10	.766	
Total....	9,273,409,708	6,133,683,274	66.14	288,430,411	2,851,296,023	1,030,246,83	3.11	2,768	2,854	55,499,807,444	966,068,66	57,449	4.97	-----	
1906.....	2,325,765,167	1,538,877,271	66.08	74,785,613	714,102,281	222,310,30	3.67	3,212	3,330	12,420,287,938	208,310,51	59,624	5.58	.748	
1907.....	2,589,106,578	1,748,515,814	67.53	80,312,375	760,277,389	227,451,83	3.80	3,333	3,470	13,031,314,268	210,792,59	61,816	5.61	.759	
1908.....	2,440,638,832	1,710,401,791	70.08	81,555,116	645,681,895	227,257,02	3.90	2,811	2,952	13,213,766,510	213,888,36	61,779	4.78	.751	
1909.....	2,473,205,331	1,650,031,204	66.72	90,529,014	732,642,083	232,981,11	4.16	3,145	3,276	13,609,183,515	221,679,45	61,331	5.34	.763	
1910.....	2,812,141,575	1,881,879,118	66.92	103,795,701	826,466,756	239,986,51	4.49	3,487	3,644	14,387,816,069	226,111,66	63,631	5.73	.753	
Total....	12,640,856,453	8,527,708,188	67.46	433,977,851	3,679,170,404	1,147,019,77	4.01	3,208	3,337	66,661,398,420	1,080,785,57	61,679	5.41	-----	
1911.....	2,852,854,721	1,976,331,894	69.28	108,339,512	768,213,345	2-3,433,61	4.68	3,156	3,324	5 15,195,262,635	223,8,3,29	67,883	4.87	4,757	
1912.....	2,906,415,869	2,035,057,529	70.02	120,091,531	751,266,806	216,828,74	4.78	3,044	3,193	5 15,871,579,628	229,902,66	69,049	4.62	4,714	
1913.....	3,163,117,831	2,235,922,626	70.02	127,331,960	829,832,248	212,657,12	4.79	3,120	3,384	5 16,351,633,266	233,456,23	70,042	5.12	4,729	
1914.....	3,111,396,422	2,266,179,768	72.83	140,531,575	704,685,079	245,621,55	4.79	2,869	3,006	5 16,335,697,810	235,985,60	71,770	4.19	4,733	
1915.....	2,956,153,202	2,088,682,956	70.65	139,298,167	728,212,079	256,213,61	4.58	2,812	2,972	5 17,247,101,881	237,272,11	72,689	4.09	4,732	
Total....	15,019,978,048	10,602,174,743	70.59	635,562,748	3,782,240,557	1,231,757,63	4.72	3,063	3,208	81,605,281,248	1,160,459,89	70,321	4.56	-----	
1916.....	3,472,641,941	2,277,202,278	65.58	151,599,841	1,043,830,822	257,544,41	4.79	4,053	4,247	5 17,525,576,908	233,392,31	73,209	5.80	4,716	
1917.....	3,824,419,739	2,581,838,511	67.51	172,037,276	1,069,750,514	230,906,31	4.72	4,032	4,851	-----	10 74,500	10 6,50	-----	-----	

<sup>1</sup> Mileage returns for balance sheet figures not stated in the annual statistical report of the Commission.

<sup>2</sup> Does not include figures for 1901, as no mileage is stated for that year.

<sup>3</sup> Returns do not include data for switching and terminal companies.

<sup>4</sup> The averages shown for 1908 to 1912 are not fully comparable with those for previous years, chiefly for the reason that the figures upon which they are based do not include returns for switching and terminal companies.

<sup>5</sup> Represents returns for Class I and Class II roads and their nonoperating subsidiaries.

<sup>6</sup> Represents returns for Class I and Class II roads and their nonoperating subsidiaries. Figures are taken from the 1913 statistical report.

<sup>7</sup> Returns for operations, columns (b) to (j), inclusive, are based on figures which exclude returns for so-called small roads and switching and terminal companies.

<sup>8</sup> Data for Class I and Class II carriers.

<sup>9</sup> Figures in columns (b) to (g), inclusive, and (i) are from monthly reports of revenues and expenses of Class I roads, excluding switching and terminal companies.

<sup>10</sup> Based on estimated figures.

commission says such a statement has value in showing the general trend of railway development in the United States.

It will be noted that the average freight revenue per ton per mile in 1916 shown in this table is lower than for any other year. The rate of return on property investment, shown in column *m*, is given as 5.8 for 1916, based on the property account of roads of Class I and Class II and their non-operating subsidiaries. In a corresponding table published last year the percentage of return was estimated at

A total of 1,228 hearings were conducted and approximately 210,133 pages of testimony taken, as compared with 1,485 hearings and 154,488 pages during the preceding year.

The number of proceedings instituted under the investigation and suspension docket was 196, a decrease of 27, and 223 such proceedings have been disposed of, an increase of 17. In addition, many new schedules were added to pending investigations by supplementary orders and a large

number were suspended by order of June 27 in The Fifteen Per Cent Case. Suspension was refused in 236 cases, a decrease of 76 as compared with the previous year. Informal complaints numbering 5,300 were received, an increase of 361.

The matter of greatest interest and importance coming under the fourth section of the act has been the question of the proper adjustment of transcontinental rates. This was discussed at some length in the last annual report, and it was shown that the fourth section applications protecting this adjustment had been reopened for further hearing. Since that time a decision has been rendered. Owing to protests against the tariffs offered for filing by the carriers purporting to comply with the order, informal hearings have been set on these protests in New York, N. Y.; Chicago, Ill., and Portland, Ore.

A hearing has been had respecting approximately 500 applications of all carriers in the country, relating to class and commodity rates, which are higher as a through route than the aggregate of the intermediate rates. This matter is now pending, and when a decision thereupon is reached all of the fourth section applications of every carrier which sought relief from the aggregate of the intermediates provision of the fourth section will have been passed upon.

#### RATE SCHEDULES

Tariff publications numbering 166,810 and containing freight and express rates, passenger fares, and classification ratings were received. The figures stated include more than 35,000 schedules naming proposed increases in rates which were suspended and also a like number of suspension supplements, none of which resulted in the establishment of rates, so that, in fact, the number of rates becoming effective during the period named did not exceed that of previous years. During this period 2,196 schedules that were tendered for filing were rejected. Reference by shippers and the public in general to the tariff files has increased to such extent as to seriously interfere with the regular work of the bureau of tariffs, and to meet this situation a duplicate tariff file has been established and equipped for the use of the public.

Since the fifteenth section amendment of August 9, 1917, carriers have filed 1,400 applications for authority to file tariffs making increases in rates. Prior to November 1, 1917, 59 applications were approved and 4 denied. The approved applications were for the most part for the purpose of correcting errors in tariffs. It required some time to perfect an organization for the handling of matters arising under this amendment, and this accounts for the small number of applications passed upon. While arrangements for administering this law were being perfected a large number of applications accumulated. All those difficulties will gradually be removed under a definite and uniform mode of procedure, and it is believed that experience will show that the amendment is capable of administration and enforcement in its full spirit without any hardship, and that, while the commission's power to suspend schedules has not been abridged, eventually these matters can in the main be more satisfactorily handled in this way than under suspension proceedings.

During the year the Southern Classification Committee has been reorganized along the lines previously adopted by the Official and Western Classification committees, and it now consists of a permanent committee of three, which will sit in practically continuous session dealing with classification matters. Some progress has been made in the direction of uniformity in the three classifications, although, as heretofore, it has been slow. Including about 830 items which are in accordance with the recommendations of the Uniform Classification Committee, except that no carload rating is assigned, the Southern Classification Committee has accepted

about 72 per cent of the Uniform Classification Committee's recommendations, and the southern classification is now about 73 per cent uniform. This is lower than the percentage of uniformity in the western and official classifications. The Western Classification Committee has accepted without change 91 per cent of the recommendations reported by the uniform committee, and 87 per cent of the current western classification is in accordance with uniform recommendations. The Official Classification Committee has accepted about 87 per cent of the recommendations of the Uniform Classification Committee and the official classification is uniform to the extent of 81.81 per cent.

Early in the present year the Uniform Classification Committee, which was organized about 10 years ago and which previously consisted of nine members, three from each classification territory, was reduced to one representative from each classification territory and a chairman. The commission is assured that this reduction is not indicative of indifference with respect to uniformity in classification, but is in line with the reorganization of the several territorial classification committees. Increased activity in the direction of uniformity is promised as a result of these changes. The work performed by the Uniform Classification Committee has been carefully done.

The block system of stating express rates, which has proven to be generally satisfactory, has, during the year, been adopted for intra-state traffic in one additional state and is now effective in 43 states and parts of Canada. Negotiations are in progress looking to its adoption in the remaining states.

#### BUREAU OF INQUIRY

Fifty-six indictments were returned for violations of the act to regulate commerce and acts supplementary thereto. Twenty-four of these indictments were against carriers or carriers' agents and 32 against shippers, passengers, or interested parties other than carriers.

During the year 37 cases were concluded. In these cases pleas of guilty were offered by 17 defendants and pleas of *nolo contendere* by 3 defendants. In 9 cases verdicts of guilty were rendered, in 3 cases verdicts of not guilty were rendered, and in 1 case the jury disagreed. In 3 cases demurrers to indictments were sustained. In 3 other cases indictments were dismissed upon motion of the government, but in each case pleas of guilty were offered on other indictments returned in the same cases.

There has been a notable decrease in the number of prosecutions against shippers for abuses of transit regulations, for falsely billing shipments, and for filing false claims for the purpose of obtaining unlawful allowances out of the rates applicable for the transportation of property. When the carriers exercise reasonable diligence in properly inspecting property offered to them for carriage their care results in protecting their revenues, and in eliminating discriminations, and in transportation for shippers at known published rates.

Rigid enforcement of the demurrage rules will do much to aid in the relief of car shortage, the commission says. Several indictments for alleged failure to impose demurrage charges are now pending trial in the district courts.

#### BUREAU OF LAW

On October 31, 1916, there were 32 cases involving orders or requirements of the commission pending in the courts, of which 11 have been concluded. Of the remaining 21 cases, 6 have been argued, submitted, and taken under advisement by the Supreme Court, and 3 are pending argument and submission to that court. Eleven are under advisement or pending hearing or final hearing and submission in the district courts, and 1 is pending dismissal or reargument in a district court. Since October 31, 1916, 10 cases have been in-

stituted in the courts, 2 of which have been concluded. One has been argued, submitted, and taken under advisement by the Supreme Court and the remaining 7 are under advisement or pending argument and submission or dismissal in the district courts. As a result of the foregoing proceedings, there are now 10 cases pending in the Supreme Court and 19 cases pending in the district courts.

Six cases to which the commission was a party have been decided by the Supreme Court of the United States. In four of these, the Terminal Cities Case, the Lake Line Case, the Sheldon Rebate Case, and the Vulcan Coal Case the position taken by the commission, was sustained, while the decisions in the Nashville Switching Case and the Paraffine Tank Car Cases were adverse.

#### BUREAU OF CARRIERS' ACCOUNTS

In the last annual report reference was made to the improved methods which had been instituted in the conduct of examinations of the accounts of carriers in the field. A creditable number of field examinations has been conducted during the past year, resulting in the discovery, and consequent discontinuance by the carriers, of various erroneous accounting practices. These examinations have proven to be essential and effectively useful, not only in securing uniform accounting but also in the prosecution of our work as a whole. One result of this feature of contact with the carriers' accounts is that any unwholesome finance, artificial returns of income and outgo, and unlawful rate manipulations, which must of necessity be carried into and be shown on its books or other records, become more difficult of accomplishment.

Recent accounting examinations indicate a noticeable and encouraging activity by the carriers during the last two or three years along constructive and economic lines, and this is particularly true since our own country became a belligerent in the war. Such information becomes accessible under the established accounting system and will be of value in looking toward permanent improvements in the carriers' methods and practices.

In August, 1917, the commission was asked by the Special Committee on National Defense of the American Railway Association to give consideration to the possibility of reducing the amount of statistical work required of carriers during the period of the war. A conference was held with representatives of the carriers and of the state commissions, and this matter was also considered by the National Association of Railway Commissioners at its annual meeting. As a result, the annual report forms prescribed for the year 1917 will be considerably simplified by the omission of certain schedules and the modification of others.

#### BUREAU OF SAFETY

The work of the bureau of safety has been substantially similar in character to the work of that bureau in previous years. A detailed report of its work is published separately.

During the calendar year ended December 31, 1916, 136 employees were killed and 2,440 injured in coupling and uncoupling cars; casualties resulting from employees coming in contact with overhead and side obstructions and from falling from and getting on and off cars occasioned 564 deaths and 15,937 injuries. This represents an increase of 13 in the number killed and 246 in the number injured in the former class of accidents, and 59 in the number of killed and 2,126 in the number injured in the latter class of accidents, as compared with the fiscal year ended June 30, 1916.

During that fiscal year, 187 cases, involving an aggregate of 542 violations of the law, were transmitted to the several United States district attorneys for prosecution. Cases comprising 127 counts were tried, of which 88 counts were decided in favor of and 37 counts adversely to the govern-

ment; 2 counts are still pending decision. Cases involving 478 counts were confessed, and 10 counts were dismissed.

During the past fiscal year there were transmitted to the several United States district attorneys for prosecution 113 cases, involving 1,197 counts, of violations of the hours of service act. Cases involving 811 counts were confessed and 444 counts were tried, of which 125 were decided in favor of the government and 198 in favor of the carriers. The remaining 121 counts are still pending decision. Cases involving 878 counts were dismissed, 841 of which were based upon the carriers' failure to report all instances of excess service, as required by an order of the commission. Two cases were decided by the Supreme Court, one against and one in favor of the government. In the circuit courts of appeal 8 cases, involving 44 counts, were decided in favor of the government, and 3 cases, involving 14 counts, were decided in favor of the carriers. Cases involving 185 counts are still pending in the circuit courts of appeal.

#### INVESTIGATION OF ACCIDENTS

During the year ended June 30, 1917, 80 train accidents, comprising 54 collisions and 26 derailments, were investigated. In these accidents 174 persons were killed and 827 persons were injured; the collisions caused the death of 132 persons and the injury of 638 persons, while in the derailments 42 persons were killed and 189 were injured. Twenty-one of the collisions investigated occurred on block signaled lines, 11 in automatic block signal territory, and 10 in non-automatic block signal territory, while 33 of the collisions occurred on lines operated by the train order and time interval system.

Of the 11 collisions investigated which occurred in automatic block signal territory, 8 were due to failure of enginemen to obey signal indications. This comparatively large number of accidents of that character emphasizes the necessity for the development and use of some form of automatic train control device to supplement existing block signal apparatus.

The investigation of the collisions in nonautomatic block signal territory has almost without exception disclosed lax observance or enforcement of rules. Nearly all of these accidents which were investigated during the past year could have been averted by proper observance of the rules which were in effect.

More than half of the collisions investigated occurred on lines operated by the train order and time interval system. In some of these cases inadequate operating rules were found, and in other instances it was found that practices not sanctioned by the rules were being followed. Many of these accidents were due to inherent weaknesses of the time interval method of operation, and a large proportion of them could have been prevented by a proper application of block signal principles.

In previous reports the commission has recommended legislation requiring the standardization of railroad operating rules. It is essential to the safety of train operation that rules be explicit and uniform, capable of being easily understood and applied, and not liable to be misinterpreted. Such standardization of rules can be accomplished only by federal legislation, which the commission again recommends.

The commission's accident statistics demonstrate that a large percentage of the derailments occurring from year to year are due to two causes, namely, defects of equipment and defects of roadway.

#### BUREAU OF LOCOMOTIVE INSPECTION

The work of the bureau of locomotive inspection during the year ended June 30, 1917, although covering a wider field, due to the extension of the law, has been substantially similar in character to its work in previous years, and is

shown in detail in the report of the chief inspector, which will be published in next week's issue.

Of 616 accidents, 389 in which 52 persons were killed and 469 injured were due to failure of locomotive boilers or some part or appurtenance thereof. Two hundred and twenty-seven of the accidents, in which 10 persons were killed and 252 injured, were caused by failure of some part of the locomotive or tender other than the boiler and its appurtenances and were investigated under the amended law.

Much of the increase in the number of defective locomotives and the accidents and casualties resulting from failure thereof has, perhaps, been brought about by unprecedented operating conditions, which, together with the shortage of labor and material, may have made difficult the proper maintenance of locomotives.

This, however, is not a justification for the operation by any carrier of locomotives that are in an improper condition for service, and the fact that some carriers by diligent efforts and careful supervision of repairs have not only maintained the condition of locomotives but have improved it during the past year, thereby increasing operating efficiency, is evidence that locomotives can be properly maintained even under the present exacting operating conditions. This can be accomplished by more careful inspection of locomotives by the carriers and closer supervision by those in charge to see that defects reported are properly repaired before the locomotive is returned to service.

The importance during the war of maintaining locomotives to the highest degree of efficiency and of avoiding unnecessary delay has been constantly kept in view, and every privilege consistent with the purpose of the law has been allowed.

In general, rules which promote safety in the operation of locomotives also promote efficiency; therefore, both in the preparation and in the enforcement of the locomotive inspection rules, efficiency in the operation of locomotives has been considered as second only to safety, and their enforcement has been so directed as to promote both.

#### BUREAU OF VALUATION

The road and track parties of the engineering section inventoried between October 1, 1916, and September 30, 1917, 52,946.65 miles of main line and 81,444.39 miles of all tracks. This was in excess of the previous year and in excess of the estimate for the current year. By January 1 next more than 150,000 miles of main line will have been covered by the road and track parties and about 100,000 miles will remain. While war conditions have interfered with the progress of this work, it is still believed that our estimated date for the completion of the work as given in the last report should stand. The engineering forces should substantially complete their field work during the year 1919 and should clean up the balance of their field work and finish their office work during the year 1920.

It is believed that the work of the land and accounting sections is in step with that of the engineers and that their work should be completed within the above time limit, provided the necessary information can be obtained from the carriers.

Arrangements had been made to begin an inventory of the long-distance telephone lines of the American Telephone & Telegraph Company last spring, but the breaking out of the war laid upon that company such unusual demands from the War Department that it was felt to be unreasonable to ask it to take up this valuation work, which was accordingly postponed upon its properties for the present.

It would be highly desirable in the prosecution of this work to finish each property before proceeding to the next, but this has been found impracticable in actual experience. The carriers are required to furnish certain information, and the work of the commission upon a particular property

can not be completed until that information has been furnished. The inability of the carriers to promptly give this information has rendered it impossible to complete reports upon their properties. For example, each carrier is required to file a schedule of its equipment, stating, among other things, the original cost of each piece of equipment as shown by its books. It is required to file another schedule showing its lands and the cost of each parcel when disclosed by its records. While this looks simple in the statement it is a very extended process in fact. The number of men who can be employed upon the records of the carrier in searching out these facts is limited so that in case of systems of considerable size a great deal of time is required. And yet no final report can be prepared by either the engineering, land, or accounting sections until these returns have been received.

This has made it necessary to pass on to other carriers before completing work on those first undertaken and the actual situation today is that the commission is engaged in the valuation of nearly every railroad system of any importance in the entire country, although scarcely any of those systems have been completed. This does not mean that the completion of the work as a whole will be delayed, for it seems probable that these returns will all be made within the time limit above named, but simply that the valuation of individual carriers can not be finished in proportion as the entire work progresses.

#### CO-OPERATION WITH STATE COMMISSIONS

In the last annual report the commission made certain suggestions and recommendations with the view of reducing and eliminating, to the greatest extent possible, the conflicts between intrastate rates prescribed by state commissions and interstate rates prescribed by this commission. It there recommended legislation to provide a legal basis for the co-operation thought desirable as being in the interest of uniform and efficient regulation from the point of view of the carriers and the public. With the view of promoting this kind of co-operative action hearings have been held in a half dozen different states, which were in fact, although not in law, joint hearings of the interstate and the respective state commissions. In one instance these hearings extended through many weeks, and while the controversies in question have not yet been disposed of, the commission believes that what has already been accomplished has been distinctly in the interest of all the affected parties, and that a proper basis has been laid for final disposition of questions which have vexed the citizens and authorities of the respective states as well as the carriers operating under these conditions, so that it will be possible to carry these proceedings to a final conclusion with substantial harmony of action on the part of the respective authorities.

The suggestion for legislation received the unanimous endorsement of the National Association of Railway Commissioners at its last annual convention. By resolution a committee was "directed to confer and co-operate with members of the Interstate Commerce Commission in bringing said matter before the federal Congress, with the view of securing the necessary statutory authority for effective co-operation between the Interstate Commerce Commission and the regulatory commissions of the several states." The committee representing state commissions is co-operating with a similar committee representing the Interstate Commerce Commission in the preparation of a draft of a proposed bill.

#### ENLARGEMENT AND SUBDIVISION OF THE COMMISSION

Since the last annual report the membership of the commission has been increased from seven to nine, and it has been authorized by law to act through subdivisions.

It is now working under this plan, by which rate cases, except such as have been reserved for consideration by the commission as a whole, are assigned, considered, and dis-

posed of by these respective divisions in monthly rotation. While one division is sitting in arguments, the other two divisions are occupied in finally disposing of submitted cases and in performing the other duties which daily come before it. By means of a series of rules relating to internal organization the commission has provided for the fullest possible co-operation among all the members of the commission and the respective divisions. Each member is kept informed with respect to the action of each division as well as of the whole commission. Conferences of the entire commission will continue to be held periodically, and in the entire re-organization it is keeping constantly before it the desirability and necessity of harmony and uniformity in all its activities. It believes that the relief which this statute was intended to afford to the commission will be realized without sacrifice of uniformity and with an increase in efficiency and gain in speed of action.

The larger subdivisions of the organization have heretofore been known as divisions, such as the division of tariffs, division of accounts, etc. Because of the statutory designation of "divisions" of the commission the name of the respective subordinate units has been changed from division to bureau.

#### RECAPITULATION OF RECOMMENDATIONS PREVIOUSLY MADE

For the reasons stated in previous reports the commission renews its recommendations to the effect—

That appropriate provision be made for punishment of any attempt, by intimidation, threats, inducements, or otherwise, to influence the testimony of any witness before the commission or to deter him from testifying; as also for punishment of misbehavior, disorderly conduct, or contumacy, in or about any proceeding before the commission.

That the Congress fix a limit of three years within which a carrier may bring action for recovery of any part of its charges, and amend section 16 of the act so as to provide that if the carrier begins such action after expiration of the two-year limit now prescribed in that section, or within 90 days before such expiration, complaint against the carrier for the recovery of damages may be filed with the commission within 90 days after such action shall have been begun by the carrier, and not after.

That without abdication of any federal authority to finally control questions affecting interstate and foreign commerce, the commission be expressly authorized to co-operate with state commissions in efforts to reconcile upon a single record the conflicts between the state and the interstate rates.

That the portion of section 20 of the act which accords the commission right of access to the accounts, records, and memoranda kept by carriers be amended so as to also accord right of access to the carriers' correspondence files.

That there should be appropriate and adequate legislation upon the subject of control over railway capitalization.

That the use of steel cars in passenger-train service be required, and that the use in passenger trains of wooden cars between or in front of steel cars be prohibited.

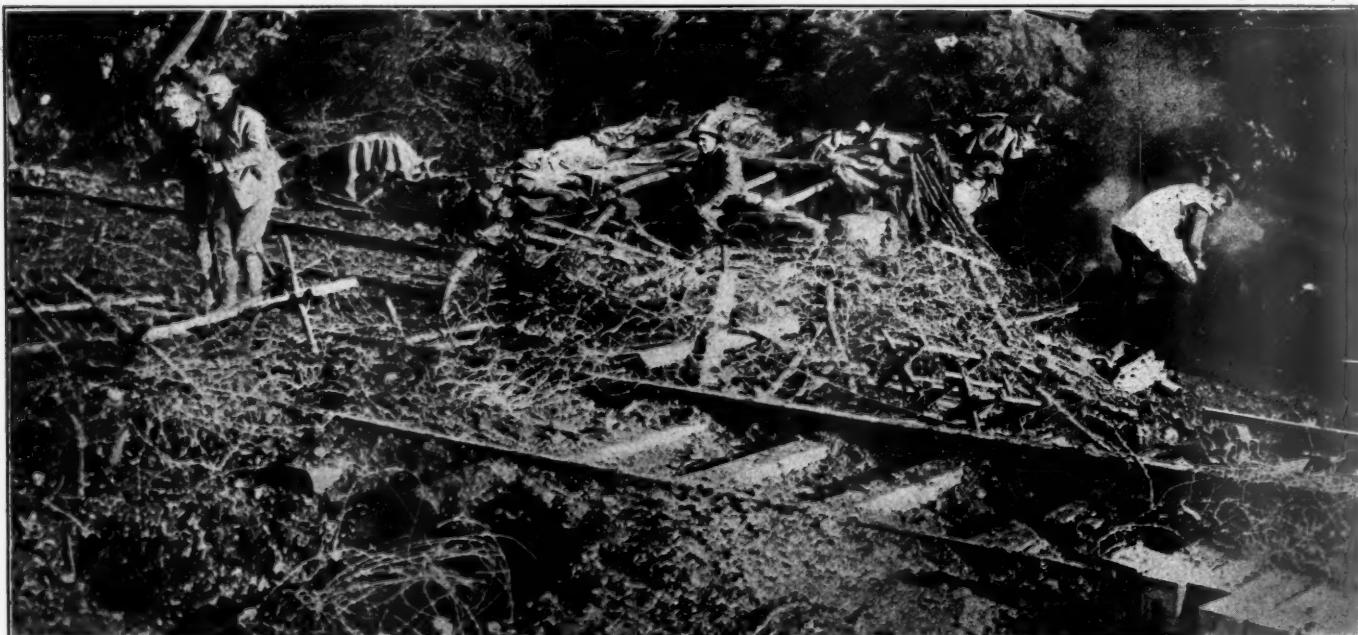
That under the Panama canal act the commission be empowered to permit, subject to further order of the commission, continued operation by a railway or under railway control of water lines or vessels where it will be in the interest of the people and of convenience to the public, even though such operation may reduce competition on the route by water.

The legislation requiring standardization of railroad operating rules be enacted.

That Congress consider the advisability of prohibiting by statute, under appropriate penalty, trespasses on the trains and on tracks of interstate carriers at places where there are two or more tracks, or within the limits of incorporated towns, or at places where the carrier by appropriate sign or warning gives notice that trespassing on its tracks is prohibited, providing that nothing therein is to be considered as making lawful any trespass which would be unlawful under state laws; and further consider the advisability of conferring concurrent jurisdiction upon federal and state courts for the enforcement of such statute.

From appropriations amounting to \$5,400,000 for the fiscal year ending June 30, 1917, the commission expended the following amounts:

As salaries to commissioners and secretary.....	\$73,916.66
All other authorized expenditures.....	1,087,614.91
Examination of accounts, act approved June 29, 1906.....	297,125.33
Locomotive inspection, act approved February 17, 1911.....	213,954.59
Safety appliance, block signal, and hours of service.....	225,674.30
Valuation .....	5,283,833.91
	\$5,182,169.70



*British Official Photograph, Copyright by Underwood & Underwood, N. Y.*

**Reopening Railroads in Wake of German Retreat. The Tommies Are Clearing Away a Barrier the Retreating Germans Had Thrown Across the Railroad**

# Eastern Operating Committee Issues Its First Orders

## Traffic Diverted from Pittsburgh Gateway—Broadway Limited Discontinued—Embargo on Export Steel

THE General Operating Committee for the eastern railroads, of which A. W. Thompson, vice-president of the Baltimore & Ohio, is chairman, and which was appointed to deal with the problems created by the congestion of the eastern lines under the plan of pooling their facilities, lost no time in taking vigorous action to effect an improvement in the situation. Its first meeting at its Pittsburgh headquarters was held on November 28. As a result of this meeting, the committee issued the following orders:

That all lines reaching the eastern Atlantic seaboard issue an embargo, effective immediately, on all export steel, billets, bars, plates, or scrap and pig iron, except for the United States Government, and that all existing permits be cancelled; no permits to be issued for these articles except by specific authority of the committee.

That all freight, including livestock and perishable, from Chicago and St. Louis and points west thereof, eastbound, and from Boston, New York, Philadelphia and Baltimore westbound, passing through the Pittsburgh gateway be embargoed and diverted to lines north and south.

That the Pennsylvania 20-hour train known as the Broadway Limited be discontinued effective on December 1 until further notice in order to give greater opportunity for the use of existing facilities for freight traffic through Pittsburgh territory.

That in order to conserve power and transportation capacity required for war essentials, the movement of freight traffic on fast or reduced tonnage rating be suspended and that all such freight be hereafter operated on full tonnage continuous movement schedules.

That only box and stock cars may be furnished for team track loading of coal.

### PLANS FOR CO-OPERATION WITH ALLIES

The reason for the export embargo was given in a resolution adopted by the committee, stating that there was stored on the ground and in cars at northern Atlantic ports 1,325,000 tons of steel and iron immediately available for movement overseas; that it is vitally essential that there be thorough co-operation in the handling of traffic for overseas shipment so that the railway equipment which would otherwise be available for coal or coke shall not be used in moving traffic which cannot be promptly trans-shipped when it reaches tidewater, and that a representative of the committee be named with headquarters in New York for co-operation with the representatives of the Allies to the end that rail transportation be limited to that traffic for which overseas transportation is available.

The committee also held a session on Thanksgiving Day and arranged for a committee on overseas traffic consisting of one representative each for Boston, New York, Philadelphia, Baltimore and Norfolk. This committee is called the "Export Division of the General Operating Committee of the Eastern Railroads" and it will sit regularly at New York city (165 Broadway). It will at once exercise control over the entire export traffic in iron and steel (unmanufactured), including billets, bars, plates, scrap and pig iron (except for the United States Government). Ultimately it will direct all overseas traffic of the eastern railroads, not only in iron and steel, but of all other descriptions, including that of the United States Government (with the approval of the Federal authorities). George D. Ogden, freight traffic manager of the Pennsylvania, is chairman, and the other members are: R. Van Ummersen, general freight agent of the Boston &

Albany; F. La Bau, traffic manager of the New York Central; Robert L. Russell, general freight agent of the Philadelphia & Reading; Archibald Fries, freight traffic manager of the Baltimore & Ohio; E. D. Hotchkiss, freight traffic manager of the Chesapeake & Ohio, and J. R. Ruffin, freight traffic manager, of the Norfolk & Western. All these will be relieved from their ordinary duties. The export division will co-operate with the agents of the Allied powers and the United States Government.

### REGULATIONS IN DETAIL

On account of the fundamental importance of the free movement of traffic for and through Pittsburgh, the order to divert traffic through that gateway was amplified to provide that all freight westbound from New England, New York, Philadelphia, Baltimore, Harrisburg and intermediate points be embargoed and diverted to northern routes.

The committee also began a thorough study of the situation confronting it and requested the presidents of all eastern roads to advise promptly by wire of any serious congestion or accumulation which results in or threatens a reduction in efficiency or capacity of the transportation plan.

Each railroad in eastern territory was also called upon to make an immediate study of the possibility of securing greater efficiency by a rearrangement of engine and train crew runs by the utilization jointly of the track and terminal facilities of two or more companies, and that, wherever found practicable, an effort be made to secure the inauguration of this plan. An order was issued that each railroad take immediate action to eliminate any existing cross haul or indirect routing of freight traffic and that a report be made to the committee of any such cross haul or indirect routing which cannot be and is not connected by individual railroad action.

### SPECIAL ATTENTION TO PITTSBURGH DISTRICT

On November 30, for the purpose of conserving transportation facilities in the Pittsburgh switching district, and aiding iron and steel industries manufacturing war materials to keep in continuous operation, the Pittsburgh district committee of the Commission on Car Service was instructed to place an embargo on all carload freight originating and terminating within the Pittsburgh switching limits, as well as on less than carload freight between points within its limits. The Pittsburgh district committee was authorized to issue permits for carload freight consisting of raw material or semi-finished products used in the manufacture of commodities for war purposes.

Owing to the shortage of labor and the urgent necessity of conserving railroad equipment and track facilities, the Pittsburgh committee was also directed to place an embargo on all shipments of slag and refuse from iron and steel industries non-self-contained. The committee was authorized to issue permits itself for the modification of this embargo.

Finding that United States troops had in some instances been routed over railroads where freight congestion exists, the committee requested the Railroads' War Board to require its representatives in charge of routing troops to keep in close touch with the General Operating Committee and to co-operate with it to avoid such congestion.

In order to prevent the cross-hauling of coal, the commissioner of the Lake Erie Bituminous Coal Exchange was directed to formulate plans for shipping and locating pools to facilitate the all-rail transportation and distribution of coal.

to the west and north, all local organizations to become a part of such general pooling arrangements under the direction of the commissioner of the lake coal and ore traffic.

#### SUB-COMMITTEE AT CUMBERLAND

For conducting the work of the committee on lines east of Pittsburgh and Parkersburg, a sub-committee was appointed to meet immediately at Cumberland, Md., to secure information covering the exact transportation situation throughout its territory and to put into effect measures for immediate relief of congested points, keeping the general operating committee constantly advised and paying particular attention to government freight and the movement of raw materials for blast furnaces. F. E. Blaser, assistant general manager of the Baltimore & Ohio, was appointed chairman of this sub-committee. C. R. Gray, president of the Western Maryland, a member of the General Operating Committee, was assigned to this sub-division.

On account of the large accumulation of coal at Cumbo and Cherry Run and on account of the unusually heavy deliveries by the Norfolk & Western to both the Cumberland Valley and the Western Maryland at Hagerstown, the Baltimore & Ohio was ordered to deliver to the Western Maryland and Cumberland Valley three large freight engines each and the Norfolk & Western was instructed to deliver them two large freight engines each to be held until the congestion of freight via the Harrisburg gateway is relieved, or until further notice.

The embargo order on traffic through the Pittsburgh gateway was further modified to provide that it shall not apply to livestock, perishable freight and foodstuffs for human, animal and poultry consumption for destinations which cannot be reached except by lines operating through the Pittsburgh gateway.

#### THE STRIKE OF A. C. L. CLERKS

The Atlantic Coast Line, to settle the controversy with its striking clerks, decided on Wednesday, November 28, to take them all back notwithstanding the grave injustice which this would work on loyal men who had come to the aid of the company; this at the request of President Wilson. President J. R. Kenly has issued a circular recounting the negotiations with the government at Washington. He says that only 23 per cent of the clerks employed by the company left the service, and that the positions vacated were rapidly and satisfactorily filled.

The circular says that the movement to form the clerks of the company into a union followed the dismissal of a clerk at a Richmond freight office on October 16 on account of unsatisfactory service. Of the clerks at that agency, 36 struck; and during the 30 days following approximately 445 clerks altogether left their work, most of them without notice; and this affected 30 stations. The federal Department of Labor sent a conciliator to the company and, after conferences at Washington with L. F. Post, assistant secretary of labor, and with W. B. Hale, member of one of the committees of the Council of National Defense, a form of agreement was drawn up which, it appears, satisfied the representatives of the government and the railroad, but it seems that it did not satisfy the strikers. After a day or two the government officers reopened the question.

The principal feature of the proposed agreement was that, for the period of the war, the road should abandon its policy of employing no clerks belonging to a union, and that the strikers would be taken back so far as their places had not been filled in a satisfactory manner by new employees. This last was modified to an offer to take back 75 per cent of the men. The agreement with the Department of Labor was drawn up on November 17; there was a conference between the government, the railroads and the strikers in Wilming-

ton, November 22 and 23, and the road again laid the matter before the Department of Labor in a long letter. This letter called attention to the highly incensed state of mind of the loyal clerks, 1,500 or more, who had endured insults and annoyances during the early period of the strike, and who objected to the restoration of the 400 strikers.

The only response, according to the circular, to this statement of November 23 was a telegram from the White House, November 24, asking that as a means of strengthening the confidence of the wage earners of the United States in the good will of employers the company take back all of the strikers who wished to return to their former positions. Mr. Kenly replied to President Wilson that he would yield, if the request were insisted on, but that he felt that the President's suggestion would entail unfortunate results. To take back all of the strikers would impose a grave injustice on the loyal men who had enabled the road to continue its operation uninterruptedly. He asked for opportunity to present the situation to President Wilson in person. On the 27th, the President renewed his request saying, in substance, that his familiarity with the general labor situation in the country was such as to warrant him in placing the special circumstances of the Atlantic Coast Line secondary. President Kenly, then, in deference to the President of the United States, complied with his request.



Photograph from Kadel & Herbert, N. Y.

**So Well Camouflaged That It Almost Spoils the Picture. An Armored Car Used by the French on the Aisne Front. The Gun Operates on a Turret. Its Being Mounted on Railway Trucks Permits of Its Being Readily Moved From One Part of the Battle Front to Another.**

**OBDURATE STATES.**—How could the Government help the railways more than by letting the States know, for instance, that they could impose "full crews" upon State commerce, but they could not do so to the detriment of national trade? That is a small but heinous and recent example, which shows the obduracy of the States regarding national welfare of the railways.—*New York Times*.

**THE VOLUNTARY RELIEF DEPARTMENT** of the Pennsylvania Lines West of Pittsburgh, in its 28th annual report, shows the following disbursements for the year ended June 30, 1917: Benefits for accidental deaths, \$78,750; natural deaths, \$273,789; disability through accidents, \$237,482; disability through sickness, \$453,011; operating expenses, \$140,836. The number of accidental deaths was 101; natural deaths, 420; disablement through accidents, 11,363; disablement through sickness, 12,420; total cases of death and disablement, 24,304.

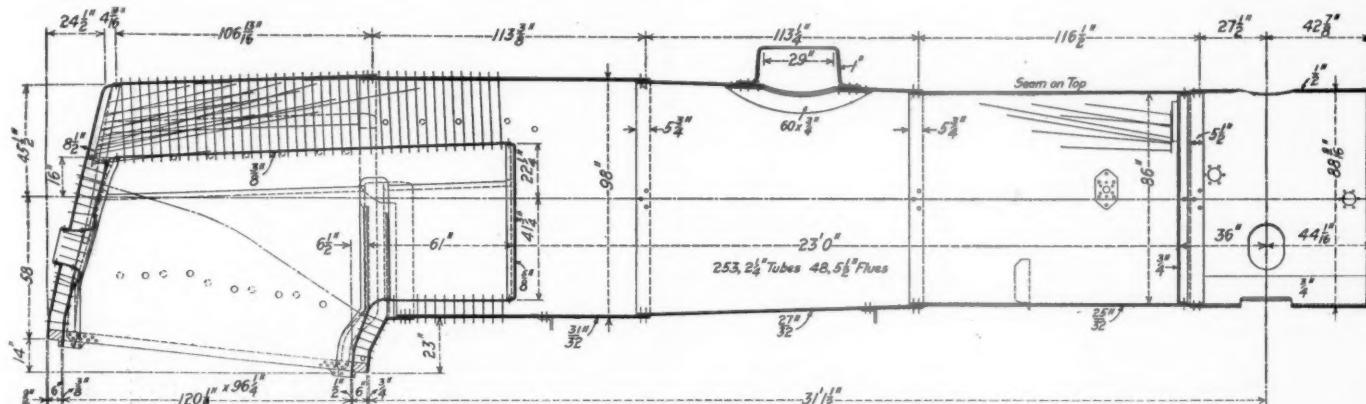
# Locomotives of the 2-10-2 Type for the Wabash

Haul 5,000 Tons Over 0.4 Per Cent Grades; Large Boilers Make Possible High Sustained Capacity

THE Wabash has recently received 25 large 2-10-2 type locomotives from the American Locomotive Company. These engines have replaced others of the Mikado type on the Decatur division between St. Louis, Mo., and Chicago. On this division the heaviest traffic is in the north-bound direction, against which the ruling grade is .4 per cent, with the longest single grade four miles in length. The average train load for the 2-10-2 type locomotives north-bound is 5,000 tons, as compared with 3,500 tons for the Mikado type locomotives previously in service in the same territory. This is an increase for the 2-10-2 type of 42.8

per cent of 38.4 per cent has been obtained and the train load has been increased 42.8 per cent.

As a rule, an increase in weight results in a proportionately greater increase in tractive effort. In this case, however, the percentage increase in weight and tractive effort are approximately the same because of the particular attention which has been given to the proportioning of the boiler. It is of the extended wagon top type with an outside diameter at the first barrel course of  $87\frac{9}{16}$  in. The largest barrel course has an outside diameter of 98 in. The boiler is fitted with 253 tubes,  $2\frac{1}{4}$  in. in diameter, and 48 superheater flues,



Longitudinal Section of the Wabash 2-10-2 Type Boiler

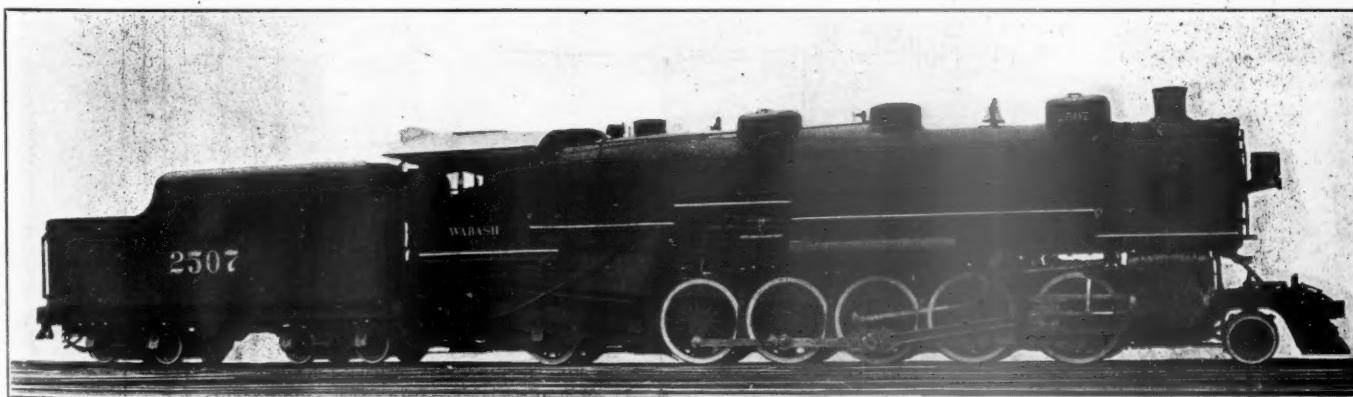
per cent in tonnage and a decrease of 30 per cent in train mileage has thereby been effected. These locomotives have been used on troop trains with very satisfactory results, hauling as many as 30 cars at speeds of 35 miles an hour. The exceptionally large boilers and the mechanical stokers with which the locomotives are equipped have made this high sustained capacity possible of attainment.

The new locomotives have cylinders 29 in. by 32 in. and

5 1/2 in. in diameter. The length between tube sheets is 23 ft.

The firebox has a grate area of 80.2 sq. ft. and is fired by the Street Duplex stoker. It is  $120\frac{1}{8}$  in. long and  $96\frac{1}{4}$  in. wide and is fitted with a Security brick arch carried on five arch tubes.

The heating surface of the firebox and arch tubes is 379 sq. ft. and the total evaporative heating surface of the boiler

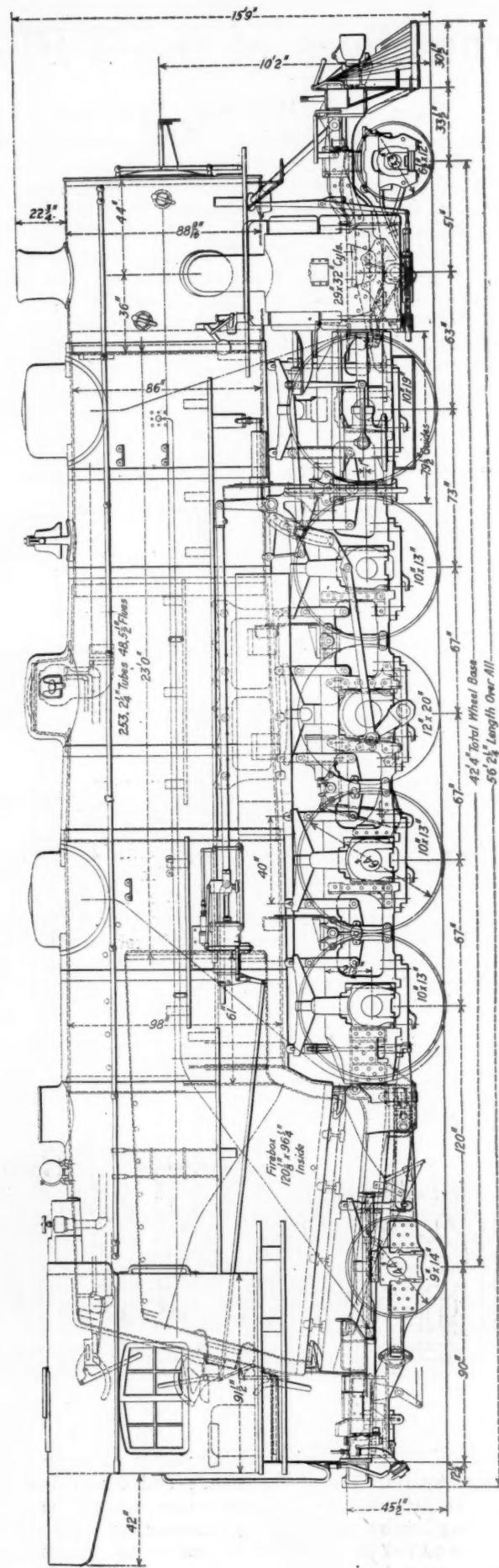
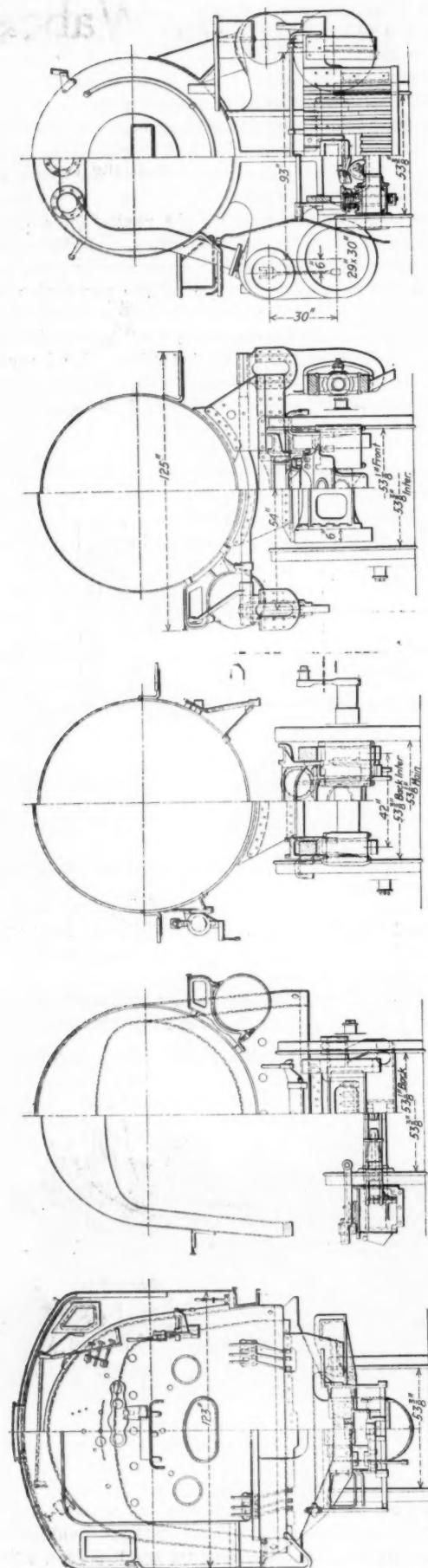


Large 2-10-2 Type Locomotive for the Wabash

a tractive effort of 69,700 lb., with driving wheels 64 in. in diameter. The total weight of the engine and tender is 591,900 lb. The Mikado type locomotives displaced by the new engines, have cylinders 26 in. in diameter by 30 in. stroke and a tractive effort of 50,360 lb. The total weight of engine and tender is 423,800 lb. With an increase in total weight of 39.6 per cent, an increase in tractive effort

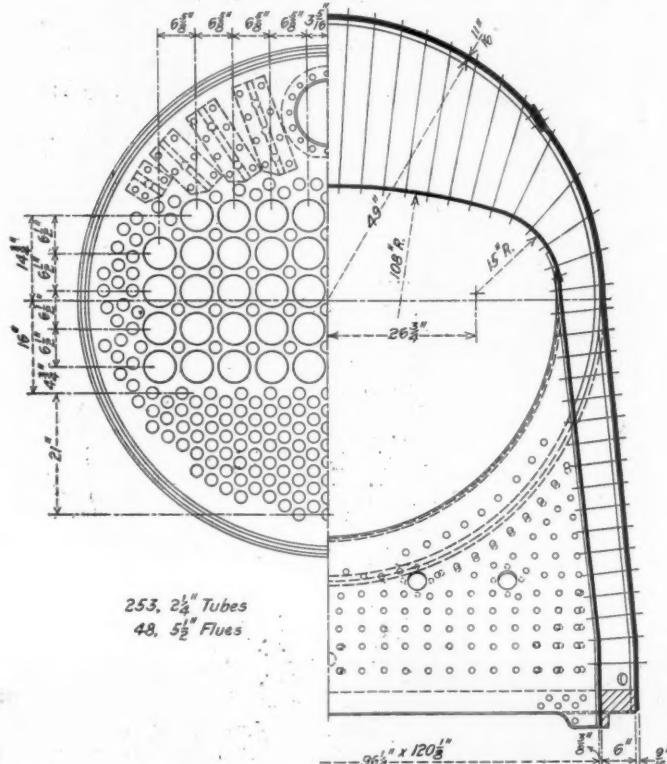
is 5,370 sq. ft. The superheater has 48 elements and a heating surface of 1,129 sq. ft.

According to Cole's ratios, a superheater locomotive having 29-in. cylinders and operating with 195 lb. boiler pressure produces a maximum cylinder horsepower of 2,954 at a piston speed of about 1,000 ft. per minute. On the assumption that each horsepower requires 20.8 lb. of super-



## General Drawing of the Wabash 2-10-2 Type Locomotive

heated steam per hour, this locomotive working at maximum capacity requires 61,443 lb. of steam per hour. In accordance with the equated values of heating surface used in Cole's ratios, the firebox, combustion chamber and firebox



Tube Sheet and Cross-Section Through the Firebox

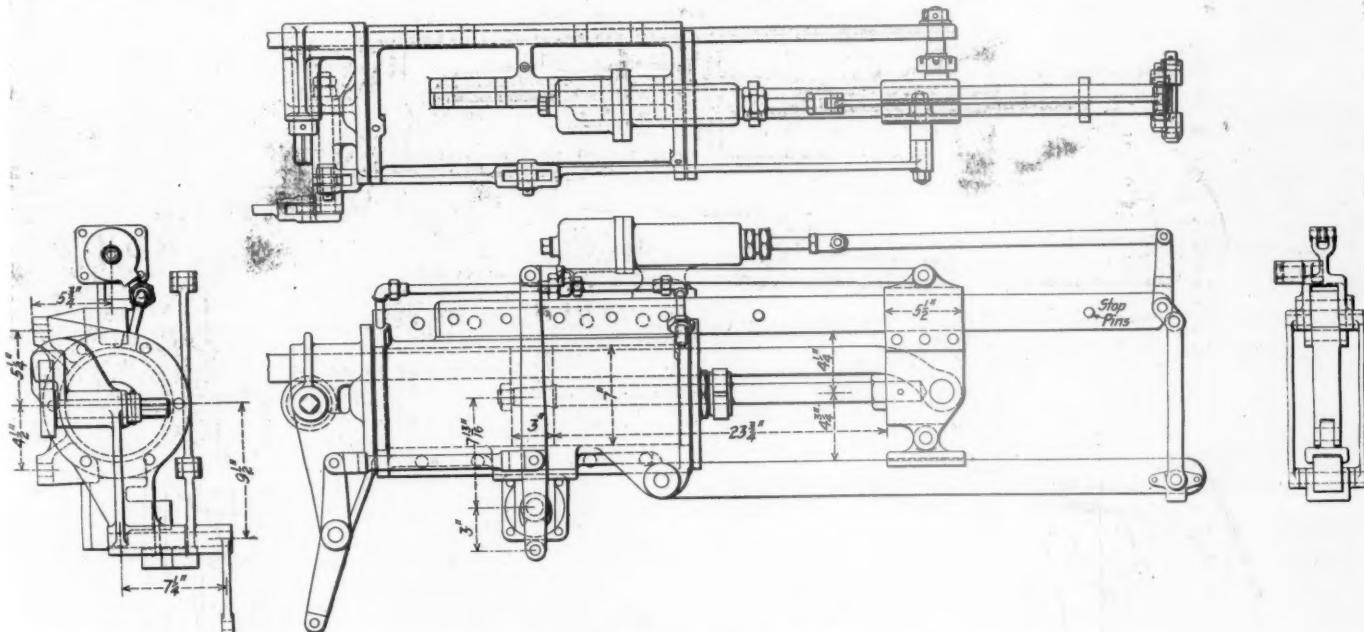
water tubes are rated at 55 lb. of steam per square foot of heating surface per hour. Tubes 2 1/4 in. in diameter and 23 ft. long with 3/4-in. clear spacing will evaporate 8.03 lb., and the flues 5 1/2 in. in diameter, having the same clear

The cylinders are of cast iron and both the cylinders and valve chambers are bushed. The back cylinder heads are of cast steel, while the front heads are of cast iron. Steam is distributed by piston valves 14 in. in diameter which are controlled by the Walschaert valve gear.

The power reverse gear is the latest type of Mellin reverse gear, furnished by the American Locomotive Company. This gear is provided with a friction clamp locking device which is actuated by a spring. One of the illustrations shows the gear as it is applied to the Wabash locomotive. The reverse lever connecting rod is attached to the lower end of the rocker arm shown at the left end of the cylinder, while the reach rod is coupled to the crosshead. The gear is operated by means of a rotary valve located below the middle portion of the cylinder; the lapping of the valve is accomplished in the usual manner by a combination lever connected at the upper end with the crosshead of the reverse gear cylinder. At the left end of the cylinder is a rack and pinion device for moving the gear when air pressure is not available.

It will be seen that the crosshead operates on a single bar guide attached to the top of the cylinder. Below the crosshead is a hinged bar connected at the outer end to the fixed guidebar by means of a bell crank and link. The locking of the gear is effected by a spring which, acting through the medium of the bell crank, causes the crosshead to be tightly gripped between the guidebar above and the hinged bar below. The clamping device is so designed that the pressure gripping the crosshead is about eight times the working capacity of the crosshead. When the reverse lever is moved, the clamp is released by means of a small pressure cylinder located in the rear of the spring cage. Through an automatic shifting valve pressure is admitted to this cylinder whenever air is admitted to either end of the operating cylinder. At the completion of the desired motion of the piston in the cylinder, the crosshead is again clamped in position by the release of the air pressure acting against the clamping spring.

The locomotives are fitted with the Woodard engine truck



The Mellin Power Reverse Gear

spacing will evaporate 9.18 lb. of steam per square foot of heating surface per hour. Using these values for the various evaporating heating surfaces, the maximum evaporation is estimated at 62,791 lb. of steam per hour, or 102 per cent of the actual maximum requirement.

and the Cole trailing truck, under a Commonwealth Steel Company's cradle casting. This casting combines the two rear frame slabs, footplate, trailing truck spring yoke brackets, and the trailing truck radius bar fulcrum.

The leading driving axle is fitted with lateral motion driv-

ing boxes and the main axle with long main driving boxes. Among other specialties with which the locomotives are fitted, are the Woodard throttle valve, Radial buffers and Foulder solid back end main rods.

The principal data and dimensions are as follows:

*General Data*

Gage	4 ft. 8½ in.
Service	Freight
Fuel	Bit. coal
Tractive effort	69,700 lb.
Weight in working order	395,000 lb.
Weight on drivers	314,000 lb.
Weight on leading truck	28,500 lb.
Weight on trailing truck	52,500 lb.
Weight of engine and tender in working order	591,000 lb.
Wheel base, rigid	16 ft. 9 in.
Wheel base, driving	22 ft. 10 in.
Wheel base, total	42 ft. 4 in.
Wheel base, engine and tender	78 ft. 4½ in.

*Ratios*

Weight on drivers ÷ tractive effort	4.5
Total weight ÷ tractive effort	5.7
Tractive effort × diam. drivers ÷ equivalent heating surface*	648.1
Equivalent heating surface* ÷ grate area	85.3
Firebox heating surface ÷ equivalent heating surface, per cent	5.5
Weight on drivers ÷ equivalent heating surface*	45.6
Total weight ÷ equivalent heating surface*	57.4
Volume both cylinders	24.5 cu. ft.
Equivalent heating surface* ÷ vol. cylinders	281.4
Grate area ÷ vol. cylinders	3.3

*Cylinders*

Kind	Simple
Diameter and stroke	29 in. by 32 in.

• • •

<i>Valves</i>	
Kind	
Diameter	14 in.
Greatest travel	7 in.

Driving, diameter over tires	64 in.
Driving, thickness of tires	4 in.
Driving journals, main, diameter and length	12 in. by 20 in.
Driving journals, others, diameter and length	10 in. by 13 in.
Engine truck wheels, diameter	33 in.
Engine truck, journals	6 in. by 12 in.
Trailing truck wheels, diameter	44 in.
Trailing truck, journals	9 in. by 14 in.

*Boiler*

E. W. T.	
195 lb. per sq. in.	
87 9/16 in.	
120 1/4 in. by 96 1/4 in.	
Crown, sides and back, $\frac{3}{8}$ in.; tube, $\frac{5}{8}$ in.	
6 in.	
253—2 1/4 in.	
48—5 1/2 in.	
23 ft.	
4,991 sq. ft.	
379 sq. ft.	
5,370 sq. ft.	
1,129 sq. ft.	
6,883 sq. ft.	
802 sq. ft.	

*Tender*

Water bottom	
Cast steel	
196,000 lb.	
33 in.	
6 in. by 11 in.	
10,000 gal.	
18 tons	

\* Equivalent heating surface = total evaporative heating surface + 1.5 times the superheating surface.



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**Looking Down from an Aeroplane on the 400 Millimeter French Railway Guns**

Huge 400 millimeter guns mounted on specially constructed cars, just arriving at the front. These guns, of long distance ranges, are used to destroy the German entrenchments and forces in the rear lines, while the smaller calibred guns, such as the famous 75s, are used on the front-line trenches of the enemy. These giant guns are operated from the cars on which they are mounted, running on strategic railway lines behind the first-line trenches.



*An American Railway Freight Station in the Hills of France. Copyright by Committee on Public Information. From Underwood & Underwood, N. Y.*

## Railwaymen Get Into Fight at Cambrai

**American Engineers Caught Between the Lines Take Up Arms and Win Praise of British Commanders**

**T**HE courageous conduct of a number of American soldiers attracted much attention. They were pioneers and specialists engaged in construction and working on field railroads. When the enemy appeared Friday morning, they exchanged their shovels for rifles and cartridges and fought alongside the Tommies. Several fell gloriously with arms in their hands facing the foe. No man who saw them at work but praises glowingly the coolness, discipline and courage of these improvised fighters." Thus the Havas correspondent at the British front, describing the formidable German attacks before Cambrai on Friday, speaks of the way the American railway engineers behind the British front before Cambrai jumped in to help against the Germans' terrific counter attacks beginning Friday last.

The Associated Press despatches on Saturday, Sunday and Monday featured the work of the American engineers. The first despatch on Saturday told how the engineers were caught between the British and German lines:

"Large numbers of American army engineers working on the British railways in the region of Gouzeaucourt, caught in the German turning movement, escaped by lying in shell holes and prone upon the ground while the British fired over them.

"There they remained until the British were near enough to enable the Americans to join the ranks, when they fought valiantly and played an important part in replying to the enemy.

"The British commanders refer to their gallant behavior with the greatest enthusiasm.

"Americans elsewhere took a busy hand in the fighting and were under hot German shell fire. Numbers of them volunteered for patrol work in the danger zone, and all acquitted themselves finely.

"A British general told the correspondent that he could not praise them too highly. It is reported that several

Americans were captured, but escaped after a few hours and rejoined the British.

"The crew of a train had a narrow escape. The engine driver, who hails from St. Louis, was standing beside his engine talking with a British soldier when the attack started. A shell struck nearby and killed the Briton, but the American escaped.

"Two more shells exploded on either side of the locomotive, and he and the crew 'dug themselves in' in shell holes, and after many hours made their escape. The railway was blown up by the Germans shortly after the Americans hid themselves.

"The engineers were mainly from New York."

An Associated Press correspondent also cabled that he could "recall no previous time when army engineers have undergone such varied and thrilling experiences as yesterday. The latest reports say that several Americans who were actually captured by the Germans escaped after a few hours and made their way back to the British line.

"How many of them spent agonizing hours lying in shell holes with the enemy all about it is impossible to state, but there were a large number."

### PROBABLY MEN OF THE 11TH ENGINEERS

The railways engineers who were in the battle were probably members of the 11th Railway Engineers recruited in New York. Their colonel is G. M. Hoffman, a regular army engineer and William Barclay Parsons, a noted New York public service engineer, is now lieutenant colonel. When the regiment was organized, Charles H. McKinstry, a regular army officer, was its colonel, but he has since been promoted to the rank of brigadier-general.

### ENGINEERS HELPED IN BRITISH DRIVE AT CAMBRAI

The American railway engineers have been at work behind the British front for sometime. An Associated Press

despatch from the American Army Headquarters in France dated November 28 said:

"American troops have played an important part in General Byng's drive before Cambrai. It is now possible to tell the people of the United States for the first time that American army engineers have had a large hand in the marvelous work which has been accomplished in the way of pushing the vital railways up to the front. The engineers have been laboring on the roads, behind the British lines for nearly four months, and two of the men who were wounded were the first American casualties announced from Washington. The military requirements have made it impossible to mention their presence here before this time.

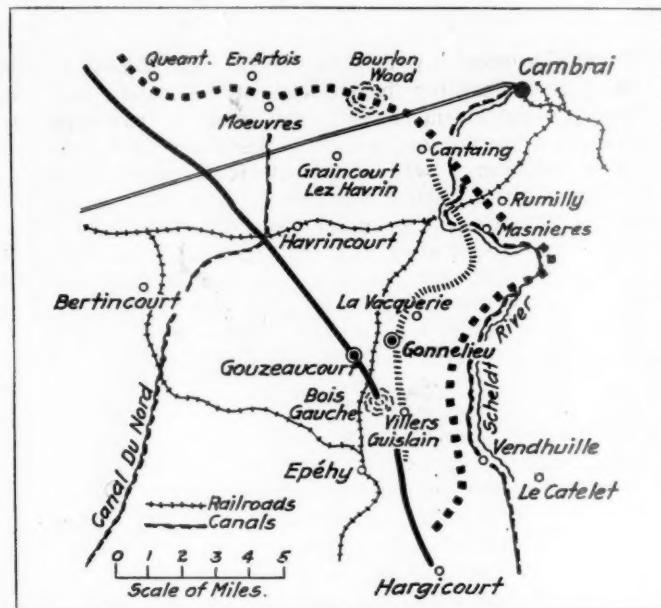
"The speed with which the lines have been laid up through the broken Hindenburg defences during the past week has called forth the highest praise from the British authorities. The Americans have been working in shifts twenty-four hours a day, and no such amount of track has been laid in this region in so short a time before. The manner in which they stood up under the strain has led to their being dubbed the 'force of American athletes,' for these untiring soldiers today are as fit and as willing as they were before the battle began.

"The Americans have for a long time been working under the range of enemy artillery and more than once they have come under heavy shell fire. One of the most striking sights along the front has been that of the engineers laboring coolly at their tracks while great shells were bursting a hundred yards away.

"At one time the Germans cut loose with their guns on a section of the tracks and tore up three miles of rails which had been laid with much labor but they scarcely had finished this bombardment when the twin lines of steel began to creep forward once more. After the engineers had reached a point where they were exposed on the skyline, it was necessary to work at night or on foggy days in order to avoid enemy observation.

"There have been three forces of Americans employed in this region since about August 1. Two of them have been

"The correspondent was talking with three officers today and the only anxiety they expressed about the future was the fear that they might later be compelled to work far back of the lines out of the fighting zone. The engineers love to hear the guns and to get so close to the firing line as military or-



The Salient at Cambrai. The Full Black Line Shows the Original British Position; the Dotted Line the Position Gained After the British Surprise Attack and the Shaded Line Approximately the Ground Regained by the Germans. The Americans Were Engaged at Work Near Gouzeaucourt and Gouzeaucourt.

ders permit. Some of them had an unusual experience, much to their liking, on the first day of the offensive. The British



British Official Photograph from Underwood & Underwood, N. Y.

A British Engineer Company Following Up a German Retreat

occupied with the operation and maintenance of light railways and the other has been constructing narrow gage lines, over which food, ammunition and material of all sorts are poured to lend support to the fighting forces.

"The correspondent has visited many of these engineers since their arrival and has found them as fit as possible and eager for work. Most of them undoubtedly look forward to the time when they will be able to join the American forces, but just now they are content to do their bit here and to learn valuable lessons in military railroading.

called for volunteer stretcher bearers to go forward to the battlefield and bring in wounded British and Germans, and a large number of the engineers offered their services, which were accepted. They just had finished a hard day's work on the railway, but they gladly undertook the new, arduous and dangerous task and labored through the night getting injured soldiers back to the dressing stations. They were highly complimented by the British for their efficiency in this line of service which was rather a far reach from building railroads."

# Railway Problem Viewed From Washington

## Government Operation Is Not Desirable; Congestion Is Confined to the East; Question of Priority Shipments

WASHINGTON, December 4, 1917.

THE announcement by the Railroads' War Board of the plan for pooling the facilities of the eastern railroads to the extent necessary to secure a maximum of transportation has aroused a flood of discussion in Washington as to whether it will prove sufficiently effective to prevent a more direct control of railway operations by the government. While much of the prominence given to the idea of government operation may be ascribed to the fact that any possibility of such a radical step is a better newspaper story than any action to be carried out by the railroads themselves, it is also evident that the idea has been persistently cultivated in certain quarters in Washington.

As far as can be learned, there is no great desire on the part of responsible officers of the administration to assume the enormous burden of responsibility that would be involved in the operation of the railroads in addition to the many tasks with which it is now confronted. After the cabinet meeting last week it was reported that the railroad plan had been discussed but that the sentiment was that the government should not attempt to interfere unless it should appear certain that the railroads could not solve the problem themselves. It is not at all difficult, however, for a newspaper correspondent to obtain during a brief call at the office of the Fuel Administration sufficient authority for a statement that the question of the necessity for the government taking over the railroads "is being considered in government circles." Moreover, it is much easier for the Fuel Administration to explain to newspaper men that there would be plenty of coal if the railroads would only furnish enough cars and handle it promptly than it is to explain *all* of the reasons why more coal has not been produced.

The prevailing peculiar psychology as to the powers and capacity of a government seems to lead the same people who criticise almost everything the government has done to assume that any new undertaking of the government in the future will function like clock-work. Under this kind of reasoning, as soon as the railroads admitted that they might not be able to meet all the demands for transportation this winter, there came a general renewal of the suggestion that the government should operate them.

Railroad executives have expressed the opinion that under the plan adopted they can serve the government as well as if they were wearing uniforms, but the opinion has been expressed in some quarters that they would succeed much better if directed by a government transportation director "who knows no more about railroading than Dr. Garfield knows about coal," as one writer put it. The same correspondent said that Dr. Garfield's "success" has been attributed to the fact that he knows no more about coal than the average man who occasionally tends his own furnace; that he glories in the fact and that the President had appointed him for that reason.

If the country would be satisfied with the kind of success in transportation that Dr. Garfield has demonstrated in increasing the supply of coal, it would not be difficult to find a man in Washington who would fully measure up to these specifications.

### PLAN NOT IN VIOLATION OF LAW

The answer to the question frequently raised, as to why the railroads had not adopted a pooling plan before, became evident when Fairfax Harrison, chairman of the Railroads'

War Board, felt called upon to issue a statement on November 29 to explain that the railroads are not contemplating a violation of the anti-pooling section of the commerce law. Mr. Harrison said:

"Various statements have been published to the effect that the plan which the railways have adopted to relieve congestion involves a system of pooling which is in violation of the act to regulate commerce. These statements are incorrect. The law forbids the pooling of freight traffic or earnings by competing railways. Our plan does not involve or contemplate the pooling of either traffic or earnings. We have merely arranged for the use of physical facilities in common at places and to the extent necessary to enlarge sufficiently the capacity of the eastern railroads. If the word 'pool' is applicable, what we have partially pooled are the physical facilities.

"The condition we are dealing with is analogous to the flood situation at Dayton, Ohio, a few years ago. It was impossible for certain railways to handle all the traffic which normally came to them. Therefore, they diverted large amounts to railways which were still open. Similarly at the present time certain railways have become so congested that they cannot handle all of the business which is coming to them, and we are utilizing other railway lines to relieve the situation.

"There is no similarity between these measures and the agreements for the pooling of traffic and earnings which are forbidden by the interstate commerce act."

While numerous government officials have told newspaper men that the laws must be disregarded in times of emergency and that they admired the railroads for having nerve enough to disregard them it is apparent that railroad officers do not feel that they can safely depend on such flimsy assurances of immunity.

### CONGESTION CONFINED TO THE EAST

Mr. Harrison has also authorized a statement to explain why unusual methods were necessary for the eastern lines.

"The measures adopted in eastern territory apparently have given many persons an erroneous impression regarding the transportation situation in the country as a whole," he said.

"In the west there is no serious congestion, and the railways are handling the traffic in as satisfactory a manner as could be expected in view of its very large volume. They are not able to furnish all the cars for which shippers ask, but this is largely due to the detention of cars in eastern territory owing to the congestion there which special measures have been adopted to relieve.

"In the Southeast the railways, without serious trouble or delays, are handling the heaviest business ever known in that territory. They could handle a still larger business and our committee anticipates that the government authorities will adopt the recommendation it has made for immediate measures to transfer movement of foodstuffs and other export material to south Atlantic ports." The Board finds that the congestion in the east has been to a great extent brought about by the excessive use of preference orders for Government freight. This is not due to priority orders issued by Judge Lovett, but to routine preference orders issued by many representatives of the various government departments. The number of these routine preference orders has become so large that on some roads they cover the greater part of the freight. This has increased congestion

in yards by causing a large increase in switching movements. Continuing, Mr. Harrison says:

"A constant flow of traffic concurrently produces the best transportation results. We are therefore emphasizing the desirability of reducing the number of preference orders, which, by causing attempts to give expedited movement to so large a volume of traffic, are slowing down the movement of all traffic and thereby defeating the very object sought. We are assured of the co-operation of representatives of the government as respects this matter."

#### FOOD AND FUEL ADMINISTRATIONS BOTH ASK PRIORITY

What appeared for a time like a disagreement between the government food and fuel administrations as to the relative importance of food and fuel as entitling them to priority in transportation has since been explained to mean that both want priority only over general freight, but so far Judge Lovett has declined to issue a general order. After a conference with representatives of the National Coal Association on November 28, Dr. H. A. Garfield, the fuel administrator, requested Judge Lovett, priority director, to issue an order giving priority in transportation to all railway movements of coal and coke and empty coal and coke cars over general freight. The coal operators had been importuning him to make this request for some time. On November 30, however, Herbert Hoover, the food administrator, entered a vigorous protest with Judge Lovett against the adoption of any policy that would put any commodity, even coal, ahead of the nation's essential foodstuffs, which, in the opinion of the Food Administration, are first in importance as a national necessity. After Mr. Hoover and Mr. Garfield had lunched together on Saturday it was explained that there was no conflict between them.

The request of the Fuel Administration was made after the coal operators had asserted that the country is facing a fuel famine and that shortage of cars is the most important factor in the situation. They were able to refer to the report of the Geological Survey for the week ended November 17 that the mines had produced only 77.2 per cent of their full time capacity and that 15.3 per cent of the deficiency was attributable to car shortage. In a statement regarding the situation the coal operators said:

"The National Coal Association recognizes that the railroads are congested and crowded with freight far beyond anything ever before experienced by them, but this does not change the fact so far as concerns the fuel conditions. The fact remains that we are face to face with a fuel famine. There is relief in sight only through additional supply of cars to run the mines at full capacity and preferential movement of the coal from the mines to the consumers. Bituminous coal operators will certainly run their mines to the limit of production if they are given the opportunity."

Coal has already received greater consideration both by the government authorities and by the railroad than any other single commodity, although without a government order the railroads have been unable to give it absolute priority. The first order issued by the Railroads' War Board after its organization was a direction to give preference in transportation to coal, coke and iron ore, and three out of the four priority orders issued by Judge Lovett have been for the purpose of promoting the movement of coal.

The requests for priority of food and fuel, as well as the general question of priority, were discussed at a conference between Judge Lovett and other government representatives and the Railroads' War Board on December 1, at which the railroad men objected to any more general priority orders. The question was then discussed by the government's inter-departmental war council on Monday, which referred it back to Judge Lovett, and Judge Lovett decided to consider the matter further before issuing an order. On Tuesday Judge Lovett held a conference with the President and is reported to have told him that general priority orders would only complicate the situation and should not be issued, at

least until the railroads have had further opportunity to demonstrate the results of their new plan.

In priority order No. 2 the use of open-top cars for a considerable list of commodities was prohibited, but no order has been issued confining the cars entirely to coal.

Judge Lovett on November 28 cancelled priority order No. 1, which was issued on August 20 to give preference to the movement of coal via the Great Lakes to the Northwest. At that time it was estimated that the requirements for trans-lake bituminous coal would be over a million tons a week during the remainder of the season of navigation, and special efforts have been devoted to keeping up an average movement that would meet that estimate. It is now believed that the requirement has been met and that any additional coal needed in that territory can be furnished by all-rail shipments. The cancellation order was made effective on November 30 and it will result in making many cars available for shipments to the central industrial section and to New England.

Pending action by Judge Lovett, Dr. Garfield telegraphed to Chairman A. W. Thompson of the operating committee for the eastern lines, asking the committee to consider the advisability of giving preference to fuel shipments without waiting for a general priority order. Mr. Thompson replied expressing entire sympathy with the principle and later telegraphed that the committee had advised all interested lines that preference must be given to coal and coke and empty open cars returning to mines to the fullest possible extent consistent with the relief of terminals and junction points. Upon learning of this, Mr. Hoover filed his protest asserting that the necessity of moving livestock and perishables and corn, oats and animal feed-stuffs must be considered as pre-eminent or large amounts of food would be lost. He also stated that the car shortage is a matter for extreme anxiety, especially with reference to coarse grains.

#### PREFERRED LIST FOR COAL SHIPMENTS

Instead of establishing a list of non-essential industries for the purpose of shutting off their coal supply, the Fuel Administration has sent to coal producers throughout the country a preferred list of consumers to serve as a guide in filling orders, which definitely requests them to give preference to shipments of coal for government orders, railway fuel, household requirements, public utilities, steel plants, coke ovens and munition plants, for a period of 30 days. Operators in Ohio, Michigan, Kentucky, Illinois, Indiana, Alabama, Tennessee, Colorado, and Oklahoma were requested to give preference to government orders, railway fuel, domestic requirements, public utilities and munitions plants, while those in Pennsylvania and Kentucky were requested to give preference also to steel plants and by-product coke ovens. All those in Virginia and West Virginia were asked to give preference to government orders, railway fuel, tidewater shipments for New England, domestic requirements, public utilities and munition plants. The request was not put in the form of a direct order, but the Fuel Administration expects it to be carried out. A communication was also addressed to state fuel administrators suggesting that attention be directed to opportunities for economy in the use of fuel on electric railways, particularly in the reduction of unnecessary heating.

#### PRESIDENT POSTPONES RECOMMENDATIONS FOR TRANSPORTATION LEGISLATION

No recommendations regarding the transportation situation were made by President Wilson in his message to Congress on Tuesday, as had been expected in some quarters. "Additional legislation," he said, "may become necessary before the present Congress again adjourns, in order to effect the most efficient co-ordination and operation of the railway and other transportation systems of the country; but to that, I shall, if circumstances should demand, call the attention of the Congress upon another occasion."

# A New and Novel System of Vessel Unloading

## B. & O. Installs Automatic Car Loading Machine With Electric Weighing Devices on an Open Pier

**A** NEW and novel system for transferring bulk materials from vessels to cars whereby the usual procedure is reversed and the load is conveyed to the cars instead of requiring the constant attendance of an engine to spot the cars in position to receive the load has recently been installed by the Baltimore & Ohio on pier No. 5 at its Locust Point terminal in the Baltimore harbor. In this way the switching is reduced to a minimum with an appreciable saving in the time of engine crews in addition to releasing the locomotives for other service. The system, which involves an electrically-operated car loader with its belt conveyor and receiving hoppers, was installed to unload ores, sulphur, clays, coal and other bulk materials from the vessels and load them into cars automatically. It loads box or open cars with equal facility. This feature of design is particularly important now because of the acute car shortage as it permits a loaded westbound movement of box cars which previously have been sent light in that direction.

While a pier built to provide three tracks is all that is re-

quired for an installation of this system, there are four tracks on the Locust Point pier. This pier is the open type and is 800 ft. long. It is entirely open to the water on the north and for about 400 ft. on the south. The north, or No. 1 track on the pier is used by cars in loading or unloading materials not suitable for handling through the loading machines and the three remaining tracks are utilized in connection with the conveying system.

The apparatus for this transfer system consists of a receiving hopper, the car loading machine and the conveyor. These are all placed on the center track, leaving the two outside ones on which to place cars the entire length of the pier. The pier affords capacity for 38 cars.

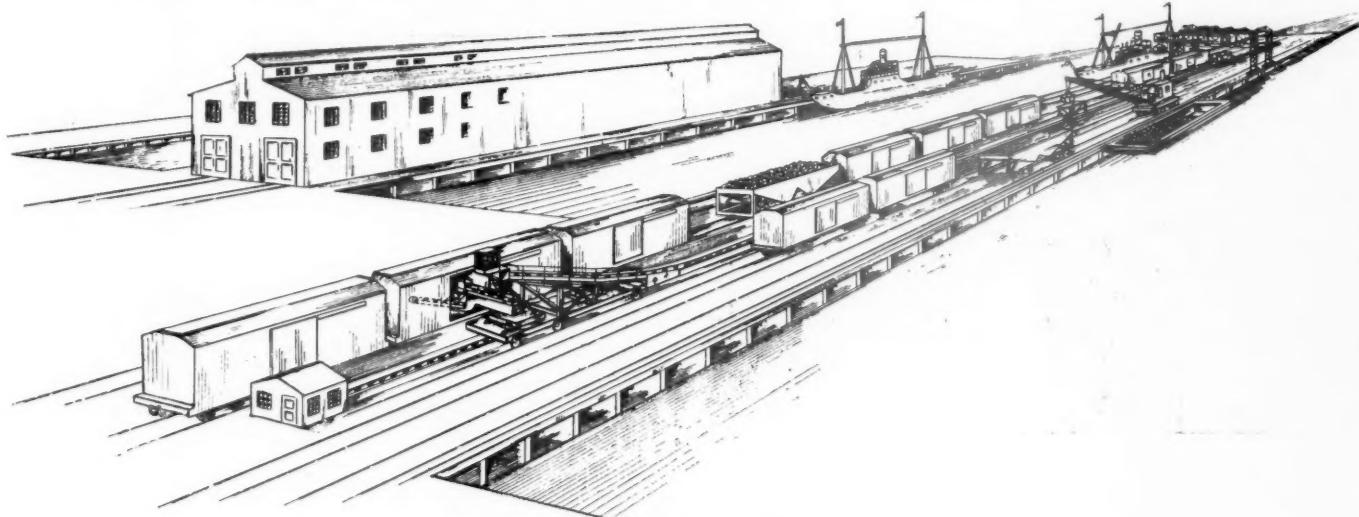
One or more receiving hoppers, mounted on standard trucks and traveling on the center track, can be used with this system. These are so placed as to permit unloading from a number of hatches at one time. The hoppers are motor-driven to allow ready movement from one hatch to the other as may be necessary for unloading the vessels.

The main conveyor, which is a 30-in. belt, extends the entire length of the pier. It is driven by a motor located in a drive house at the land end of the pier. A positive take-up is provided at the water end of the pier to provide for the slack in the belt.

The loading machine is also mounted on trucks and runs

on the center track. The conveyor belt runs through this machine which is motor driven and travels the entire length of the pier. The machine is fitted with a loading arm and an intermediate conveyor between the machine and the arm. The intermediate conveyor is movable in a horizontal plane, having a swing of 270 deg. The loading arm has a horizontal movement through 270 deg. in addition to a vertical movement sufficient to clear the side of the largest open car. With the horizontal movement of the intermediate conveyor it is possible to get the loading arm inside the box car door, and the two movements of the arm permit the load to be placed in any position in the car.

In operation the load may be transferred from the vessel to the hoppers by a gantry, locomotive or ship's crane. The hoppers have a capacity of 20 cu. yd. of materials and each hopper is fitted with a two-speed feeder or conveyor which delivers the materials to the main conveyor which carries them along the pier to the loading machine. By means of this two-speed feeder and an adjustable gate the amount of



Perspective Drawing of the Dock

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The main conveyor, which is a 30-in. belt, extends the entire length of the pier. It is driven by a motor located in a drive house at the land end of the pier. A positive take-up is provided at the water end of the pier to provide for the slack in the belt.

The loading machine is also mounted on trucks and runs

material delivered to the main conveyor is controlled. This feature permits a capacity load to be delivered to the main belt at all times irrespective of the nature of the material and prevents overloading when handling free-flowing materials. From the main belt the materials are delivered to the cars through the loading machine by 20-in. belt conveyors on both the intermediate conveyor and the loading arm.

The operation of the system is electrical and with the exception of the hopper traverse and the speed of the hopper conveyor which must be set at the hopper, it is entirely under the control of one operator in a cabin located on the loading machine. The power is supplied to the system by three wires strung along timber bulkheads which separate the middle track and the conveying apparatus from the outside tracks. A fourth wire interlocks the main belt control and the control on the hoppers. This feature permits starting and shutting down the whole equipment from the operator's cab on the machine.

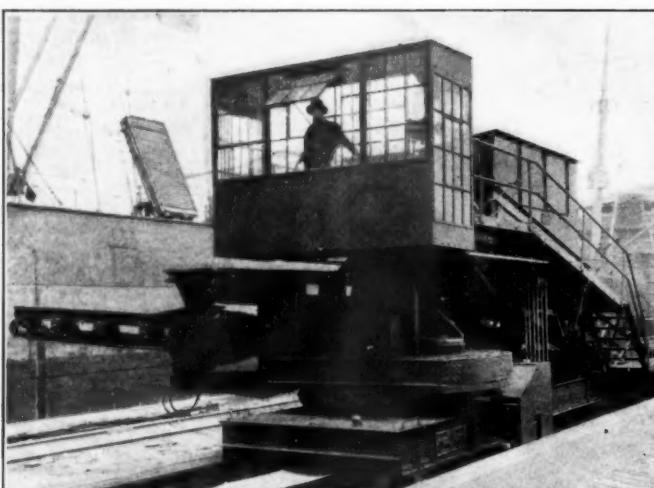
The loader is placed in motion by the closing of a switch in the cabin. By means of a centrifugal control the belts must start in their proper sequence. Those from the intermediate conveyor and the loading machines start first and must reach a certain speed before the main belt can move. The operation can be stopped from any point along the system in case of accident or for any other reason, by wire ropes

which are provided on the bulkheads on either side of the conveyor and which are connected to the main circuit breaker in the drive house. To start again it is necessary to go to the drive house and reset the circuit breaker.

A drum control is provided on the hopper for the traverse and two drum controls on the loading machine, one for the traverse and the other to control the horizontal movement of the intermediate conveyor. The drum control of the hopper is not under the control of the attendant on the machine and must be operated from the hopper itself.

The loading arm is moved to its various positions by hand, the work being done by the man directing the loading of the cars. The horizontal motion is secured by pushing or pulling the arm to the desired position and the vertical movement by a worm, operated through a hand ratchet. The arm is so constructed that the movements are easily made by one man. By this system box cars have been loaded in ten minutes; open or gondola cars may be loaded in less time, governed by the capacity of the unloading facilities.

By means of an electric weighing device which automatically weighs the material moving over the machine, the operator is in absolute control of the car loading. Before loading, the tonnage which shall be delivered to each car is



**Head-on View of the Car-Loading Machine Showing the Intermediate Conveyor and the Loading Arm**

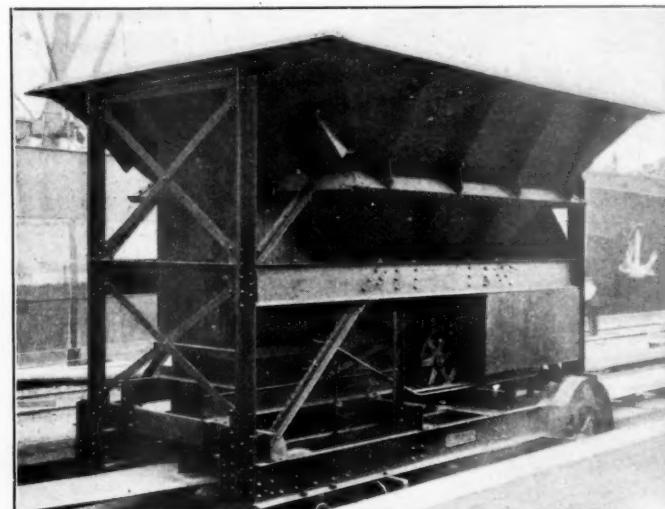
determined; the register is set for one-half this amount by the operator and the loading arm is swung into position to load one end of the car. The conveyors are then set in motion and when the predetermined amount has passed over the machine, a bell is rung automatically as a signal to the operator to stop the operation. The arm is then swung to position to load the other end of the car and the operation proceeds as before. This feature prevents under or overloading of cars and insures a proper distribution of the load over trucks. In addition to this device there is another register which records the total tonnage handled over the system, so that an absolute record of the tonnage is obtained. This weighing device is guaranteed for accuracy to within one-half of one per cent.

The loading capacity of this system is governed by the capacity of the cranes used to unload the ship. The labor saving feature is evinced by the fact that the entire loading operation on the pier can be carried on by two operators.

There was designed as a part of this improvement (but not yet installed) a shuttling-type boom gantry crane for handling not only bulk material, but miscellaneous merchandise freight as well. This gantry is provided with a traverse along the length of the pier with a shuttling movement of the boom, sufficient to allow reaching the off-side of the vessel's hatch, making possible the unloading of boats on either side of the pier.

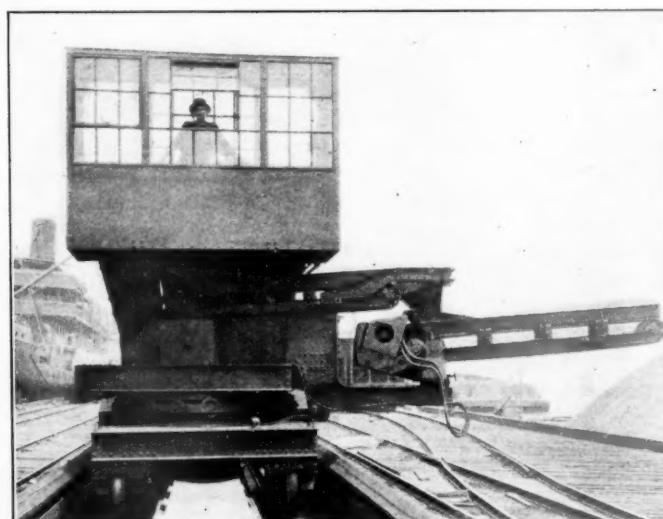
To unload bulk material a clam shell type of bucket would be used, the motor for closing it being built in the head of the bucket, permitting the bucket to be removed, and allow the hoist to be used for the unloading of merchandise or miscellaneous freight. The present unloading operation is carried on by locomotive and ship's cranes.

An important feature of the system is the readiness with



**The Receiving Hopper**

which it may be installed on existing structures, as any pier of sufficient size and of sufficient strength to carry the locomotives and cars may be utilized. In the installation described above, which is the first of its kind, an existing pier was used and yards already in service provided the storage capacity for the loaded and empty equipment. The main advantages are a reduction in the cost of operation by the replacement of men by mechanical contrivances and entire



**Side View of the Car Loader. The Automatic Weighing Device Is Contained Within the Steel Shelter Back of the Operator's Cabin**

elimination of the cost of switching engines for spotting cars.

The system was designed and patented by Francis Lee Stuart, president, International Conveyor Corporation, New York, and formerly chief engineer of the Baltimore & Ohio. The Baltimore & Ohio constructed the improvement under the direction of H. A. Lane, chief engineer; M. A. Long, assistant to the chief engineer; W. S. Bouton, engineer of bridges; J. S. Davis, electrical engineer; J. T. Wilson, district engineer, and F. C. Thornley, consulting engineer.

# The Depreciation of Railroad Property\*

A Clear Exposition on Value and Depreciation, Including a Number of Interesting Original Suggestions

By G. C. Hand  
Secretary, Kansas City Southern.

**D**EPRECIATION and value are facts inseparably related. Depreciation is the subsidence of value. The amount of depreciation is the change which a declining value undergoes in a given interval of time. Intelligent consideration of the subject, or its fruitful discussion, is postponed to a decision of the controversy with respect to value.

## VALUATION

Physical value is affirmed by one party and denied by another; commercial value is alleged by the second and disputed by the first: and thus the issue is joined.

Whatever the angle of approach, and whatever the argument advanced, the conclusion is inevitable that value is either physical or commercial, or in part physical and in part commercial. It is necessary to differentiate between the thing valued, which is substantive, and the value assigned, which is attributive.

The commercial and the physical standards of valuation are distinct—the one economic and the other uneconomic. They are quantitatively and qualitatively opposed, and therefore in mutual contradiction.

Of two contradictories, one is true and the other false. No intermediate between them can be true. From the falsity of one, the truth of the other follows. From the truth of either, the falsity of the other may be inferred.

The doctrines of equitable election and of legal estoppel preclude the assertion of claim by or on behalf of a party both under and against the same state of fact, principle of equity, or rule of law.

Value is the measure of wealth, the degree in which property exists, expressed in terms of wealth subsisting in a different form. It proceeds from utility, and is the resultant of the algebraic sum of the forces of demand and supply. In form, it is a statement of equivalence; but, since equivalence cannot properly be affirmed of things essentially unlike, and because the content of wealth is the only attribute usually or necessarily common, value is in substance an equation.

The import of value is that the terms of the equation—the thing valued and the concrete thing employed to express value—are mutually convertible without deficit or remainder. When this is not feasible, the affirmation of value is untrue. Predicated of property, but employed in another significance, value is a misnomer. The fallacy of ambiguity is to be avoided.

The value of a railroad is the present worth of the annuity created by the periodic returns of net revenue, in enjoyment or expectancy, funded at the prevailing rate of commercial profit. The elements of utility and appropriation, demand and supply, together with resulting price, are here present.

Although there may be as many potential values as there are distinct uses and separate demands, there can be but one value effective in the same place and at a given time. Value is unique.

The suggestion of "other values and elements of value" is unscientific and unintellectual. Going-concern value, for example, is not the difference between commercial value and cost of reproduction, but the divergence between value re-

sulting from the primary demand and that consequent upon the highest subordinate demand: between transportation value and scrap or dismantlement value.

The proof is conclusive. A railroad in operation and producing net revenue has a value greater than if in a static condition, neither used nor useful. A property yielding 2 per cent. on cost of reproduction when capital commands 6 per cent., is worth less than reproduction cost. According to hypothesis, going-concern value is then a negative quantity. But value is either zero or a positive quantity, never negative.

Physical value is a meaningless collocation of terms. If value were a physical fact, the track-mile, with a fixed quota of equipment and appurtenances, would be its appropriate unit. But the track-mile is merely quantitative, and not accurately expressive of magnitude, while value expresses both quantity and quality.

Stated in terms of itself, it conveys no intelligence. In order to bring it into relation to an extraneous standard, the constituent elements and the standard itself must first be reduced to a common denominator. When equivalence to other property is asserted, economic quality is introduced, and value assumes a distinctively commercial character.

Physical value, as its proponents understand and intend to be understood, is the commercial value of physical property, ascertained in such manner as wholly or in some part to exclude commercial factors of determining effect.

It adopts the principles of economic science, but denies their reasonable application and legitimate force. It yields reluctant cognizance to the forces of demand and supply, but it ignores effective demand consequent upon the transportation use, and proceeds upon the premise of demands which ceased to be influential upon the conversion of materials to such use, and which are thereafter in suspense. It proclaims financial equivalence, but disclaims the mutual convertibility of things declared in substance and effect to be equal.

When the forces and nomenclature of economics are admitted to the terms of the problem, they must be accepted in their positive, as well as in their negative, consequences and implications.

There is no logical escape from the conclusion that a railroad is either an end or a means to an end. It cannot be both. Nothing finite is a means to itself. If an end, it depreciates in the ratio of physical exhaustion, but not otherwise, and is not normally liable to appreciation. Function must be totally ignored. As a means, it appreciates or depreciates according to the manner and degree in which it accomplishes the end whereunto it is appointed.

The value of property must be ascertained with reference to the capacity for and performance of a productive service, or in total disregard of those considerations. Physical value cannot be impeached upon functional grounds, nor can a commercial value be impugned for physical reasons, unless upon the failure of a material agency in the discharge of its office.

It is judicially decided that the constituents of value are at least four in number, including: original cost, and cost of reproduction; revenues and expenses, and the amount and market value of outstanding stocks and bonds.

The concept of physical value is realized in original cost or cost of reproduction. As constituting a test of value,

original cost, or actual investment, is rejected by the courts upon the ground that the expenditure of capital may have been wasteful or extravagant. It has no determining effect, and is at most accorded a discretionary consideration.

Waste and extravagance occur, if at all, in the adaptation of means to an end, and must be understood in their relation to the object of railroad construction. Investment is wasteful or extravagant when it fails to produce an instrumentality capable of meeting the competition of rivals, of rendering a service in request for a reward not in excess of its reasonable value, and of yielding a profit to the owner; that is, by reason of an insufficient demand for service, or an excessive supply of it, and the consequent inadequacy of price. The qualification is economic, and irrelevant to physical value.

Revenues and expenses constitute the subject-matter of operating income, credit and debit, leading to a balance which represents the net operating revenue or a net operating deficit.

Net revenue is the cause, of which the aggregate market value of outstanding stocks and bonds is the effect, and is properly to be regarded in conjunction with it. The value of securities outstanding is the base, whereof net revenue is the percentage, and the ratio of return is the rate. It is value resulting from the use of property, and varying with the profitability of that use.

Present value is not necessarily co-extensive with legitimate value. After half a century of limitation in disregard of value, or with regard to a false concept of value, present value is probably a remainder.

With original cost eliminated, and net revenue merged into security value, the issue is so narrowed as only to include cost of reproduction and the amount and market value of stock and credit obligations.

Both the statute and decisions limit the application of fair value to such property as is devoted to the public convenience; that is, to property used and useful. The law ignores mere physical existence. Instrumentality is affirmed, function is asserted, and the emanation of value from productive service clearly implied. Thus physical value is excluded by antecedent condition.

Cost of reproduction derives a verbal but negative plausibility from the economic truth that price (pecuniary value) tends towards such cost. But price seldom reaches that level, and its coincidence with reproduction cost is accidental and temporary. Before that stage is reached, the marginal producer is eliminated, supply is curtailed, and the tendency of price is to advance. The intervening margin is variable, and the relation of price to cost of production inconstant.

The importance of reproduction cost consists in the indication which it affords concerning the liability to competitive construction, in its effect upon the course and duration of returns.

Again the argument is economic in character, and not germane to physical value.

A new competitor will not enter the field with an old and depreciated plant. Cost of reproduction *less depreciation* is not responsive to the question of value. Cost of reproduction is an empirical finding, incapable of exact proof or scientific demonstration, and concerning which rational minds equally well informed may and do differ radically. It is not an ascertained fact, but usually a disputed opinion, advanced in advocacy of the cause of a party. The opportunity which it affords for an abuse of discretion is virtually unlimited.

Cost of reproduction is alleged in avoidance of commercial value, and must in the nature of the case differ from it in a substantial manner and to a material degree. It is a non-commercial value, not definitely related to commerce, and unadapted to serve as the basis for its reasonable regulation.

Cost of reproduction is nowhere else recognized as the criterion of value, and it is therefore discriminatory. Fairness does not consist with discrimination.

Cost of reproduction is an intermediate between contradictions, barred by the law of excluded middle.

Actual investment and cost of reproduction are alike in kind, and differ only in degree according to the lapse of time. Actual investment is cost of reproduction in the past tense. Reproduction cost is actual investment assumed as of the present time. Both are values resting upon demands no longer effective. The reasoning which warrants the rejection of either, precludes the acceptance of the other.

A new line of railroad, pending the establishment of commercial relations, is not lawfully entitled to allege cost of reproduction as the test of value. But at that time actual investment is identical with reproduction cost, as nearly as the latter can be ascertained.

When the event demonstrates that a line of road has been unwisely located, cost of reproduction is accorded no greater respect than actual investment. Indeed, reproduction cost may well exceed actual investment, quite apart from the question of depreciation.

The title of reproduction cost to rank as value is actually challenged by reason of the rarity of population, the insufficiency of traffic, the presence of competition, and the inefficiency of operation. Population is insignificant except as it is translated into traffic. Traffic is demand for service in visible manifestation. The service which a particular carrier is capable of providing is its contribution to supply. Service offered by other agencies is competitive supply. Efficiency affects the quantity and quality of supply.

Each fact alleged, every law invoked, is both approbated and reprobated.

The demand for and supply of transportation service, now renounced in order to justify physical value, are now weapons employed in the furtherance of an assault upon its integrity.

Cost of reproduction, as already observed, is a pseudo-value, dependent upon arrested demands. It is asserted, denied when greater than value resulting from effective demand, and reasserted with damaging qualification when less than value consequent upon efficient demand.

Before exhaustion occurs, it is affirmed that useful life is the test of value, and denied that value is in the ratio of physical existence to reproduction cost.

After exhaustion takes place, it is denied that useful life is the criterion of value, although indefinitely prolonged, and affirmed that value is in the proportion which unexpired physical existence sustains to reproduction cost: subject, however, to adequate traffic, immunity from injurious competition, and to a suitable degree of efficiency; that is, to the forces of effective demand and supply.

Efficiency and inefficiency, the sufficiency and the insufficiency of traffic, are what might be termed continuing functions. They are opposite aspects of the same fact, lying respectively above and below zero, and differing solely in degree. The location of zero is relegated to the discretion. When negative, they are properly alleged in derogation of value. When positive, and abundant in extent, their efficacy to produce an augmentation of value is wrongfully denied.

Contrary to reason, and in antagonism to law, the advocate of physical value asserts claim to the benefits of both the physical and the commercial standards, but disavows the pains and penalties of either; and he does so in the ascertainment of reasonable value pursuant to law.

But the value of property results from the use to which it is put and varies with the profitability of that use, present and prospective, actual and anticipated. There is no pecuniary value outside of that which results from such use.—Cleveland, Cincinnati, Chicago & St. Louis Ry. Co. v. Backus, 154 U. S. 439, 445.

In the absence of a fixed standard of value, rate regulation is arbitrary, and private property is exposed to predatory invasion. The recognition of two or more standards marks a departure from standard. The effect and presumptive purpose of a plurality of standards is to discriminate. An act of confiscation is not mitigated, and not divested of its pernicious character, because it is evasively accomplished by fiat of special and destructive definition.

## DEPRECIATION

Value fluctuates directly as appreciation, and inversely as depreciation. Value expired, during the term of its existence, is one in origin and substance with value remaining unexpired. An accepted standard of value is obligatory as a basis upon which to reckon depreciation.

Original value is equal to depreciated value plus depreciation. The sum of unlike quantities is nondescript. Depreciated value is original value minus depreciation. The difference between unlike quantities is alien to either.

In view of commercial value, or of physical value modified by "other values and elements of value," neither original cost nor cost of reproduction affords a tenable basis of depreciation. In contemplation of reproduction cost, original cost is similarly disqualified.

Original cost is not co-extensive with value. Depreciation is a change in value. Therefore original cost does not afford a rational basis for the ascertainment of depreciation.

Cost of reproduction relies for support upon the considerations underlying original cost. Because of this, and inasmuch as reproduction cost is challenged by reason of economic disability, depreciation is not the proportion of such cost corresponding to physical depletion; nor, to state a distinct fact, is it equal to the present cost of necessary repairs and renewals.

Value is not proportionate to physical existence, nor is its variation commensurate with any change in physical extent or duration. Property used and useful, although in a state of depletion, possesses value, or at all events is capable of possessing it. A plant not used nor useful, although greater in physical extent and superior in physical quality, is destitute even of physical value. A positive quantity is greater than zero. It follows that depreciation—that is, the expiration of value—is not in the ratio of expired physical existence to any principal sum. Still less does it sustain a fixed relation to physical existence expiring, but never permitted to expire.

The contribution to value made by repairs and renewals will be less than, equal to, or greater than, their current cost. If less than cost, the conversion of liquid assets into fixed property has the effect, not of neutralizing depreciation of the property in its entirety, but of producing it. When equal to cost, they neither produce appreciation nor prevent depreciation, and their postponement involves no dereliction. Unless greater than cost, repairs and renewals will not normally be made.

The cost of deferred maintenance is the sum necessary to overcome depreciation resulting from physical exhaustion; but such cost does not necessarily reflect its extent as a function of value. Depreciation is equal to the current cost of postponed repairs and renewals, plus the loss in productive efficiency during incapacity.

Presuming the average life of ties to be 10 years, for example, the combined life remaining unexpired in each series of that number will, upon the lapse of a few years, be the quotient of 9 plus 1, or of 10 plus 0, divided by 2; and depreciation will amount to 50 per cent of cost, less the value of scrap material recovered. The salvage of ties is a negative quantity.

After a period of adjustment more or less prolonged, this will be broadly true of all elements of property other than land.

In the orderly course of events, this alleged depreciation occurs during the period of development; when it is held that the carrier is entitled to reimbursement, but when, upon failure for any reason to exercise it, the right lapses; when title to a fair return is in suspense, and when reimbursement is probably impossible; when cost of reproduction does not constitute the test of value, and when depreciation is disproportionate to it.

This is the highest state of physical excellence possible to

attain without a waste of capital, in the form of labor and materials, so flagrant as to defeat title to fair remuneration, and to vacate the claim of reproduction cost to represent value. Neither upon the performance of its conditions, nor upon a failure to perform them, is the equivalence of reproduction cost to value acknowledged. Thus the theory of physical value is self-destructive.

At the present time locomotives, cars, and certain classes of materials, are quoted at advances of from 100 to 300 per cent within three years. When these conditions prevail, it is possible for so-called depreciation to exceed original cost, or cost of reproduction as of an antecedent date, notwithstanding a residuum of useful life; while salvage may well reach a sum equal to or in excess of either cost.

The decisions give express recognition to the potentiality of appreciation. But in the circumstances here described appreciation cannot occur until, within the life of the least durable material, advances in the wages of labor and the prices of supplies approximate 100 per cent, and never in normal conditions. As renewals are made at increased cost, the supposed appreciation diminishes to a corresponding extent.

Appreciation and depreciation cannot both be ascribed to the same property, or any component part of it, at a given time. Appreciation or depreciation is the difference between two values. Present value cannot be at once greater and less than value at a focal date in the past.

It is the province of capital to provide plant and equipment in a condition for operation. It is the function of expenses to wield the instrumentality and maintain it in a condition for continuous operation. It is not incumbent upon, nor is it permitted to, the expense account to perpetuate a condition of newness.

At the time when repairs and renewals are necessary and economically possible, depreciation is said to be matured. Previous to that time, it is popularly described as accrued. Depreciation is an item of operating expense, antecedent to the question of profit. Upon maturity, the operation which neutralizes it and restores the original condition, occasions a charge to operating expenses, and it is actually so made, without effect upon accounts representing the cost or value of fixed property.

In its credit relation, it affects working capital through the media of vouchers, pay rolls, and the material account, subject to reimbursement from revenues in excess of operating expenses, including depreciation as a part thereof.

At an inchoate stage, and pending maturity, depreciation cannot be so charged as to involve a credit in diminution of property value.

Anticipated charges to the income account, such as accrued interest and taxes, might with equal reason be deducted from the value of property.

A railroad is a means to an end. While efficiency is maintained, an instrumentality suffers impairment, not from inherent causes or defects, but from the lapse of the office or its performance by other agencies; that is, from lack of traffic, the inferior quality of traffic, or the pressure of competition.

When repairs are punctual and adequate, and renewals are in proportion to the average life of materials, operating expenses have fully discharged their obligation to the property, there is no failure on the part of a material agency in the performance of its function, a condition of undiminished capacity is perpetually maintained, and existing depreciation, if any, results from causes other than physical exhaustion.

The depreciation here alleged is of the accrued variety. The distinction between accrued depreciation and matured depreciation is purely fictitious, and without foundation in fact. Depreciation is the difference between two values, let it be repeated, and its maturity is in the same ratio as its accrual. The fallacy of ambiguous terms is plainly evident.

Accrued depreciation, falsely so called, merely points the time when depreciation will occur, in the contingency that operating expenses fail in the discharge of the obligation devolving upon them. Inasmuch as depreciation is an element of expenses, it is necessary to conclude that upon the performance of such obligation depreciation is neutralized. Neither reason nor law admits the imposition of impossible conditions.

The effect and legitimate purpose of recording accrued depreciation is to equalize operating expenses, the occasion for which seldom arises in railroad accountancy.

Accrued physical depreciation rests upon the incomplete exhaustion of material elements, and is independent of the perpetuity of useful life. Functional depreciation, that is, obsolescence and approaching inadequacy, predicated upon the expiration of useful life, is independent of physical existence, extent or duration. They are mutually incompatible, and not at once capable of rational justification.

It is important to differentiate between an element of property and a unit of property. The element is related to the unit as the atom to the molecule. The unit is an integral part, capable in itself of performing a transportation service, and of possessing a transportation value. Although the element may be indispensably necessary, the contribution which it makes to value is undetermined and indeterminate.

Neither value, appreciation nor depreciation, can be allocated to constituent elements, any more than it is possible to decide which leg of a tripod is most essential to its stability. Each must be ascertained with reference to an integral part. Rails and ties, locomotives and cars, are not integral parts.

A line of railroad otherwise complete, but without locomotives, or having but one rail, or lacking one length of rail in each mile of track, is neither used nor capable of use, and not admitted to the inventory of property which is the subject of fair value. The locomotive and the rail, or length of rail, are under a like disability. Value other than for purposes of dismantlement is not attributable to either set of elements apart from the other. Whether physical or commercial, value is in abeyance until the component elements are combined into a unit, complete in itself, capable of producing service, and of response to demand.

The franchise is a condition precedent to use or usefulness. But certainly the advocate of physical valuation can ill afford to assume an attitude which would impute all or any part of value to an intangible right.

Depreciation, in its application to fair and reasonable value, raises no embarrassing question. It is ascertainable in its entirety by a simple and direct mathematical process. The problem derives its origin from physical value, in relation to which it is insoluble.

A single problem involving two or more unknown quantities is incapable of solution. The question of depreciation introduces three quantities, of which two being known, the third can be deduced. It presents itself in two aspects, viz.:

First, given original value and depreciation, to find depreciated value.

The analysis of depreciation is directed towards the end of synthesis. The purpose is to determine the aggregate amount of depreciation, which in turn has for its object the ascertainment of depreciated value by subtraction. But since value is not proportionate to physical existence, because depreciation is not in proportion to physical exhaustion, and inasmuch as depreciation cannot be allocated to constituent elements, analysis and synthesis are alike impossible. The proposition presumes the conclusion in the process of reaching it, and admits of no solution.

Second, given original value and depreciated value, to find depreciation.

The terms of the proposition furnish the desired result, to which depreciation is merely corollary, and not a matter of direct concern.

## PRACTICAL PATRIOTISM AND TRANSPORTATION\*

By Howard Elliott

Inspector of Transportation, Los Angeles and Salt Lake, Los Angeles, Cal.

Co-operation, like patriotism, is something more than a state of mind. The girl who says, "I love you, Mother," and then sits down to read the latest novel while mother does the dishes and scrubs the floors, is minus the divine spark of love which is active rather than latent. And the man who preaches patriotism from the housetops, uncovers at the sight of Old Glory, is the first to rise at the sound of the "Star Spangled Banner," but who fails to buy a Liberty Bond, declines to unload his freight cars quickly, refuses to economize on food and fuel, or to do anything affirmatively to help his country in time of need, is but a shade superior to the traitor who gives aid and comfort to the enemy.

Here are a few ways in which the citizen can help the railway, and by so doing, help the country, in these perilous times:

1. Load and unload cars the day they are spotted. If you regard demurrage as a get-rich-quick scheme of the carriers, cheat them out of some of their riches by handling your cars within the free time. The agents will rise up and call you blessed.

2. The upper berth of a freight car is used only part of the time. Please fill your cars top and bottom. Encourage your customers to buy in carloads instead of less than carload lots. This makes heavier car and train loading, reduces the car shortage, and saves fuel on the locomotives.

3. Purchase upper berths in sleeping cars. They are 20 per cent cheaper, the ventilation is better, there is less noise, less jarring, less chance to have your toes stepped on, the springs are better, there is more privacy, more room to stretch, more evenness of temperature, and you are performing an act of patriotism by helping the railway make every sleeper do double duty. A lady who had been almost persuaded to take an upper said to the ticket agent, "But I'll have to get up before I go to bed." "Very true, madam," replied the resourceful agent, "but the advantage is that the porter takes steps to put you to bed."

4. When you make a shipment by freight or express, pack it as securely as though it were destined to a foreign port, write the address as though it were to be read by a one-eyed man in candle light. See that tags are fastened securely. Erase all old marks. A shipment can't talk, and in case of two addresses, someone will have to guess which is right. Often the guess is wrong. If there are two stations of the same name in the same state, show the county. Help "make shipments expressly safe," a slogan I have just invented and which I am going to donate to some of my express company friends if they want it. The Salt Lake Route's ratio of loss and damage payments to gross freight revenue is less than four mills. This is as good as any road's anywhere, but railways nowadays are not trying for individual records. We want to win a war, not a skirmish, and for that reason we have pooled our resources and our ideas so that we may be able to "do more with less."

5. When the next legislature convenes, say to your senator or representative, "This is no time to pass restrictive railway legislation. If you must introduce some measures affecting common carriers, put in some repealers on the senseless car limit, extra crew and valuation bills. Try to put through an anti-trackwalking law and an act requiring drivers of vehicles to stop before crossing railroad tracks at grade. Such a program will conserve man power and resources."

\*Abstract from an address before the Commercial Board of Los Angeles, Cal., on October 24.



Fig. 1. An Electric Escalator Acts as a Speed Boss.

## Handling Freight Faster With Fewer Men

By Using Electric Trucks One Road Moved 60 Per Cent More Freight With 42 Per Cent Less Labor

By F. C. Myers

The Society for Electrical Development, Inc.

ONE day in July, 165 men were busily engaged in handling the LCL freight at one of the larger freight transfers. The men were so numerous they got in each other's way. On the next day, when electric truck service was started, 48 men were discharged. At the same time the freight was handled faster and with less congestion. Since the introduction of electric trucks the tonnage handled through this shed has increased 500 tons a month and the force has not been enlarged.

At another terminal one afternoon in August 30 team trucks were waiting to unload at 4 P. M. At 4:30 there were 32 trucks still waiting. The last truck backed up at 6:19 and it was 6:30 P. M. before all were unloaded. During this time only 3,875 packages were handled. One week later, when electric power had replaced the hand trucks, 19 trucks were waiting to unload at 4:00 P. M.. At 4:30 the number had increased to 22 trucks. All trucks were backed up at 5:15 and the last one unloaded at 5:45. Forty-five minutes were saved and 5,350 packages were handled. The results given are from actual observation by the writer. It should not be understood that power trucking apparatus is recommended for every terminal or transfer point. Each case must be considered on its merits as conditions will determine what equipment best meets the requirements. There is no one remedy for all freight hauling problems any more than there is one medicine that will cure all the ills of the human family.

To talk about labor shortage seems futile, but the indications are that the real shortage has not yet arrived. Millions of men may be called into the government service before

the end of the war. The men left at home to do the work will be the defectives, the old and the young. This means inefficient workmen and more and more dependence must be placed on mechanical aid. The men that are left will be in great demand so that wages, which are high now, will go still higher. Where the end will be no man is bold enough to prophesy.

At the same time manufacturers are constantly increasing their output, which is another way of saying that shipments are steadily increasing. The 100,000,000 people of the United States will continue to live and require the necessities of life. Our allies and our army across the sea and in the training camps must be fed, clothed and housed. The burden that is falling on the railroads is enormous and will increase. How are they to handle the situation, limited as they are, in labor, in equipment and space for expansion?

This problem will not end with the war. The enormous wastage of men and material that is going on cannot be replaced in a day or a year. Cities, yes, countries, must be rebuilt and the burden of transportation will be heavy for many years.

Wonderful results are being obtained by heavier loading of cars and by urging shippers not to delay in loading and unloading shipments. Locomotives are being operated to the limit and trains are moving as rapidly as coal and track-age will permit. There is still room for heavier loading. But there is greater room for improvement in loading and unloading methods and in handling freight quickly and economically at transfer points and terminals.

The efficiency of human labor depends primarily on two

things. The physical condition of the labor and the mental attitude with which the work is tackled. Men of the class obtainable for truckers and freight handlers do not usually take the best care of their physical condition. Their mental attitude is one of absolute non-interest. They do the work because they must and only do as much as is necessary to hold their jobs, or to make a "stake."

Much of this trouble can be overcome and freight movement facilitated. Making the work easier is one method and to make the work easier machinery and power must be used for lifting and moving freight. Some development has taken place along these lines and some of the railroads have made great improvements, but much is yet to be done, as at many terminals freight is still handled just as it was when the railroads were first built.

#### FUNDAMENTALS OF PROBLEM

The fundamentals of the freight handling problem are few and simple. Freight is moved either horizontally or vertically. The hauls are either short or long. The package either

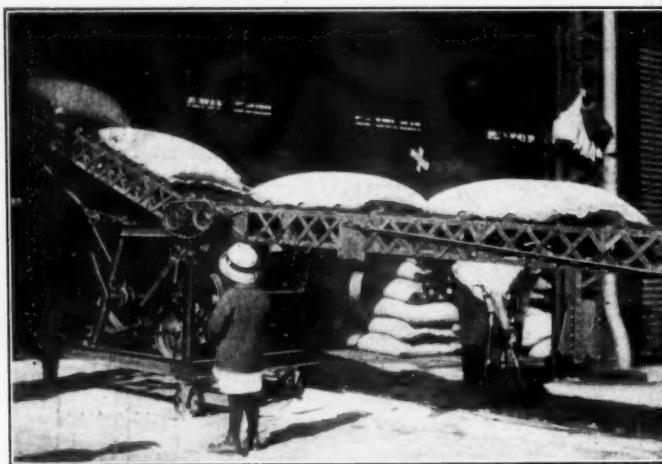


Fig. 2. Portable Electric Conveyors Pile to the Roof and May Be Placed at the Most Convenient Point

vary greatly in size and weight or they are uniform in size and weight. When considering the solution of freight handling problems these fundamentals should always be borne in mind.

Lifting and lowering freight from one level to another is increasing in importance because of the increasing number of double decked freight houses. Ramps have been used from time immemorial. It is not uncommon to see four or five men struggling to push a truck up a ramp, then walking to the lower level for the next truck load. With reasonably good floors one man can move a truck horizontally where several men are required to lift it up the ramp. In order to increase the number of men on trucks going up ramps extra men must be employed or they must be taken away from regular trucking work. Ramps usually increase the labor cost out of proportion to the material being moved or else delay the regular work.

The old two-wheeled hand truck, with its "husky" on the handles is the most familiar figure wherever freight is to be loaded or unloaded or transferred from one carrier to another. This method is slow and unreliable. Wherever lifts are necessary mechanical means are available for doing the work and should be employed. Inclined elevators or escalators, (Fig. 1) can be used. These machines are electrically operated, so that power is consumed only when they are being used. They have a large capacity, because of the steady stream of trucks that can be kept moving upward. They travel at a uniform speed and thus act as a "speed boss" for the truckers. They can be designed to travel in either di-

rection or the direction of travel can be reversed so that they can help truckers to bring freight down as well as to lift it up.

Under ordinary conditions, a 10 or 15 horsepower electric motor will provide all the power necessary to operate the inclined elevators or escalators. The current consumption will therefore be approximately 11 kilowatts an hour when working to full capacity. With a power rate of 5 cents per kilowatt hour, the maximum cost of current will be 55 cents an hour. As full load conditions will seldom maintain except for a few minutes at a time, the cost will be materially less than this. Also there is no cost for power when the elevator is not in use. Under present labor conditions the wages of two men for an hour will about equal the cost of electric current, but the difference in the amount of freight that two men can lift as against the amount that one of these elevators can lift is beyond statement.

#### LEVELING DEVICE FOR ELEVATORS

Vertical elevators are well known and largely used. There has recently been a development in this equipment that is worthy of note. A micro-leveling device has been produced that automatically maintains the floor of the elevator level with the floor from which the freight is being taken or onto which the freight is being placed. The time required for properly stopping the elevator and adjusting it as the load becomes heavier or lighter to facilitate truck movement out of the door is eliminated as is also the need of struggling to move trucks when the height of the elevator floor changes. Elevators are now proportioned to suit the style of trucks to be used and with capacities suited to the loads to be handled.



Fig. 3. Electric Trucks May Be Operated by Cheap Labor

Portable inclined elevators (Fig. 2) will be found economical in some locations, for instance, where quantities of material are to be lifted from one level to another at different points in a freight house, but where the quantities are not sufficiently large at any one point to warrant the expense of a permanent installation. Another case would be where freight is to be lifted or lowered from cars into boats at different points, or where large quantities of material must be handled from teams directly into cars which cannot be placed on team tracks or boats. These portable elevators consume approximately the same amount of electricity as the stationary equipment, depending on the kind and amount of material to be handled.

The horizontal movement of freight offers a big opportunity to save time, money and man power. Each time packages have to be lifted on or off a truck, time and human energy is consumed. Time is lost each time that a truck has to wait to unload. Congestion on platforms is caused by the man handling of freight and the inability to move it as fast as

it arrives. This condition applies also to car unloading. Every time that a car has to wait for truckers a delay is experienced that increases the cost of freight movement and ties up investment that should be working.

#### ELECTRIC TRUCKS

A man with a two-wheel truck is usually a liability these days. Even though wages are high, men are difficult to get and they cannot work fast enough or long enough to do the work required. Machinery can work continuously if properly attended. Electric trucks are "fool proof." They can be operated by the most ignorant labor (as shown by Fig. 3), and almost the only way they can be wrecked is by deliberate intent. They can be operated in approximately the same space as the old two-wheel truck. Their capacity can be made anything desired.

Two types of electric trucks are available. Carrier trucks, Fig. 3, and tractor trucks, Fig. 4. Carrier trucks carry the load just as the usual automobile truck carries its load. The tractor trucks draw the load just as the locomotive draws a train of cars. Both of these types have their applications and neither of them will be found economical under all freight transfer conditions.

Carrier trucks are especially adapted to work where they must be driven, loaded and unloaded by the same man,



Fig. 4. One Man With an Electric Tractor Truck Can Haul Half a Dozen Loaded Trailers

or wherever material is to be moved to scattered locations in such small quantities that it would not pay to have gangs of men to load and unload it. Carrier trucks can be run directly into cars for loading and unloading. They can be used economically where the loads can be handled quickly. It has been found that the use of one of these trucks for only a few hours a day may save more than liberal interest charges on the investment. For example, carrier trucks are being economically used for handling baggage, express and mail at passenger stations. The driver loads and unloads them and the loads are delivered to and received from trains standing at any of the platforms. More baggage is moved in one load than several men could move on the old style hand truck and the trip is made at the rate of from 5 to 8 miles an hour, where men pushing a loaded truck would hardly average 2½ miles an hour even for a comparatively short distance.

Ordinarily, a carrier truck will either release for other work or eliminate from the payroll five or six men. Instances have been known where the force of truckers has been reduced 40 per cent and where the investment paid for itself in four months. If one truck will eliminate four men drawing \$3 a day the payroll will be reduced \$12 a day. Counting 300 working days in the year, the reduction on the payroll will be \$3,600, which is 6 per cent on \$60,000, an attractive saving when it is remembered that the truck costs approxi-

mately \$2,000 and that it can be operated for about \$1 a day of 10 hours.

Tractor trucks have their special field of utility. A tractor can draw a heavier tonnage than a carrier truck of equal battery capacity can carry, other conditions remaining equal. Tractors are useful where freight can be collected at some central point in the freight house and then delivered to the cars or teams. They can be used wherever loading and unloading gangs can be employed. The tractors are usually operated by two young men or boys, one to do the driving and the other to attend to the coupling and uncoupling of the trailers. The more continuously the electric trucks are operated the greater will be the saving because this part of the system represents the major investment. This is important because the overhead charge operates continuously.

#### OPERATING DATA

The following data has been taken from the files of a large railroad. On a short haul 24 men with hand trucks handled 49,881 lb. of freight in two hours. At the same place, under the same conditions and with the same class of freight, a tractor and trailer, with 10 men, handled 73,097 lb. of freight in 2½ hours. The amount of freight handled was increased 68 per cent. The number of men were decreased from 24 to 10 and the length of time in handling the freight was only increased one-quarter hour. The labor charge in the first case, at 30 cents an hour, was \$14.40. In the second case it was \$6.75. The net saving in labor alone was \$7.65, but 23,216 lb. more freight were moved. At this rate for an eight-hour day with the truck, 259,904 lb. of freight will be handled by 10 men, against 199,520 lb. with 24 men, providing the 24 men could keep up the pace throughout the entire day, which is not likely. Actually under the old system each man handled 1,049 lb. of freight an hour. With the trucks each man handled 3,248 lb. of freight an hour. As the length of haul increases, the advantages of the electric truck increase, due to its greater speed.

The writer recently saw a tractor perform. A large piece of machinery, which on skids would just slip through the door of a car, was to be loaded. Of course, a truck of any kind was impossible. Eight men with pinch bars were trying to pinch the machine along the platform with the usual delays and slow movement. It was suggested that the platform ahead of the skids and the skids themselves be greased and the machine pushed into the car. Under these conditions a tractor did the work in a few minutes, and all the men but two were released for other work. The time saved cannot be computed in this case, but it would not take many such operations for the truck to pay for itself.

Other means of handling freight are available and each has its peculiar application. A movable loop has recently been developed for moving freight from loading platforms into storage or to team stands. The special claim made for this system is that the overhead trolleys travel from a suspended track, which occupies no floor space. Aisles are reduced to the minimum and goods can be piled up close to the ceiling. The carriers travel in one direction only and by means of the movable ends of the track the distance of travel can be made as short as is consistent with the length of travel necessary. Also by moving the loops the entire floor space is covered and available for storage.

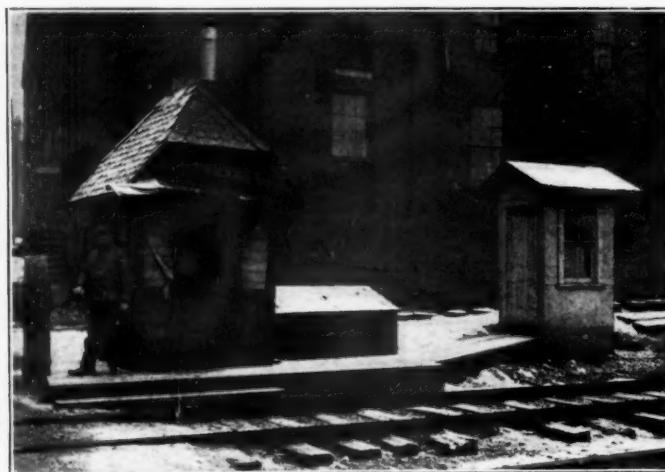
Gantry cranes, traveling cranes and traveling hoists can all be used advantageously under certain conditions, especially where the freight to be handled is heavy and bulky. Conveyors are especially economical where the packages are uniform or so nearly so that one type of conveyor can be used advantageously for a large proportion of the work. These conveyors are, however, usually specially designed so that unless large amounts of similar freight are to be transferred the investment will not be warranted.

For general application the industrial truck of either the

carrier or tractor type will be found to have the widest application. They can be operated anywhere, up or down grades, do not require trackage, low class labor can be employed to drive them, the batteries may be charged during the idle hours of the truck or reserve batteries may be installed and the discharged batteries charged while the truck is operating, so that 24-hour operation is possible. The labor charge connected with freight handling is greatly reduced when handled electrically on account of the fewer men required and the larger amount of freight handled without a corresponding increase in time.

### IMPROVED SANITATION AT OUTLYING POINTS

One problem of railway operation which has received little attention is that of sanitation at railway stations, round-houses, shops and other buildings housing railway employees, where no local sewerage system is available. In most such cases the requirements are so limited that the expense of a sewerage system would be unjustified even if the problems of water supply and outfall could be solved readily. The primitive substitutes for sanitary plumbing



Kaustine Installation in a Separate Building for a Crossing Watchman

and sewerage in common use are unsatisfactory and apparently incapable of proper maintenance. The same conditions apply to railway labor camps except that the situation is usually more aggravated because of the larger number of men to be provided for.

In view of this situation considerable interest is attached to a sanitary system now on the market known as the Kaustine waterless toilet system, which provides for the chemical sterilization of the sewage matter by a chemical known as Kaustine, accompanied by a system of ventilation. The Kaustine toilet has the general appearance of a water toilet with a white china bowl, seat and cover. The bowl is attached to an Armco iron antiseptic tank, containing the active chemical which is designed to dissolve the solid matter and act as a thorough germicide. The contents of the tank is rendered harmless and drained off into the ground without fear of any contaminating effects.

The systems can be made to accommodate the requirements of the particular situation, whether large or small passenger stations, signal tower, shop, camp, etc., modifying the installation according to the number of persons to be accommodated. The antiseptic tanks are generally buried in the ground to prevent freezing. Each tank is equipped with an internal valve for emptying; this valve is commonly connected with a four-inch tile. A large disposal bed is unnecessary and under usual operating conditions the tank requires emptying and recharging about twice a year. This

is on a basis of 15 persons to each unit, with a tank having a capacity of 125 gal.

A number of railroads have installations of this system, particularly in the east. The Albany Southern, the Buffalo, Rochester & Pittsburgh, the Baltimore & Ohio, the Boston & Maine, the Lehigh & New England, the Maine Central, the Mobile & Ohio, the New York Central and the Philadelphia & Reading, are using this type of toilet in stations, signal towers, crossing watchmen's houses and other buildings that cannot be connected with a sewer. The Lehigh & New England has applied the system to its shops at Pen Argyl, while the Pennsylvania Railroad, the Lehigh Valley, the Delaware & Hudson and the Baltimore & Ohio have installed it in various maintenance camps, the first named road alone having 750 units in use in its camps.

The photograph shows a Kaustine toilet arrangement for a crossing watchman on the Philadelphia & Reading in a case where the watch house is not large enough to accommodate the installation. A better plan, where the size of

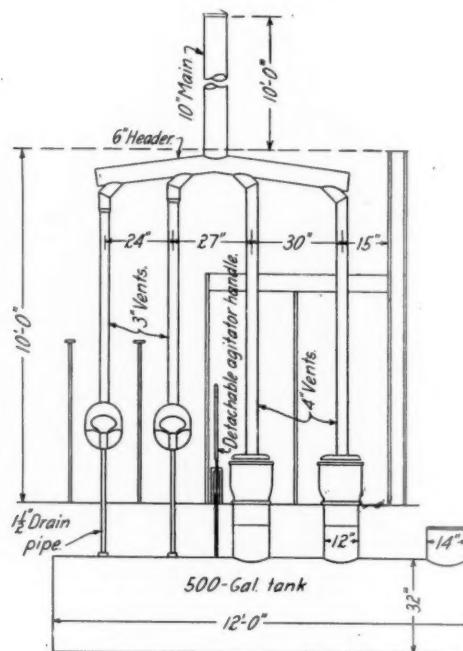


Diagram for a Small Installation

the building permits, is to partition off part of the shanty for a toilet room.

An installation of this system consists of a relatively small number of parts and is said to be simple in application. The equipment is manufactured by the Kaustine Company, Inc., Buffalo, N. Y.

GERMAN RAILWAY OPERATIONS IN OCCUPIED TERRITORY is the subject of an article in a recent issue of the London Daily Mail, which says that at the beginning of September, 4,000 locomotives and 155,000 cars were employed in Belgium, Serbia, Roumania and Courland.

EMPLOYEES' INSURANCE BENEFITS ON THE B. R. T.—The second year of the Group Insurance Contract, made by the Brooklyn Rapid Transit Company with the Travelers Insurance Company for the benefit of the employees of the system, ended September 15 with a total of 6,010 employees insured. The premium contributed by the employees during the year amounted to \$34,965.85, while the benefits derived by the beneficiaries of deceased employees amounted to \$66,000 or within \$2,430.98 of the total premium received by the Travelers Insurance Company. Beneficiaries of deceased employees therefore received \$31,034.14 more than the amount of premium contributed by the employees.

# French Railroads Must Have Higher Freight Rates\*

War Conditions Cause Enormous Increases in Expenses;  
Serious Deficits; Fifteen Per Cent Advances Proposed

From *Economiste Français*, September 15, 1917

**A**MONG all the industries railroad operation is the only one in which the net cost has not stopped increasing while transportation rates have remained the same. And this state of affairs is not entirely due to war conditions. In the years preceding the war the prices of coal and metallurgical products, of which the railroads consume vast quantities, had already been raised to a very noticeable degree. According to the index numbers fixed by the Statistical Office of France (Statistique Générale de la France), which cover over 25 materials used in industry, if the average basal index number calculated on the years from 1901 to 1910, and assumed to be equal to 100 is compared with the index number of the same materials for the first half year of 1914, the index number is 113.3, that is to say, the average increase is more than 13 per cent in four years.

In spite of the fact that these averages are only approximately correct it may be assumed that the price of coal and products of the metal industries, among the 25 products which served as a basis for this calculation, have increased to a still higher figure. The price of coal, indeed, has increased at a much higher rate. The statistics of the mineral industry for 1914 give the average price per ton of coal at the mouth of the mine. After having fluctuated between 10 and 11 francs in the years 1890 to 1898 it began to increase and after some fluctuations it went beyond 15.50 francs in 1912, continuing its rise in the following years.

Railroads consume vast quantities of coal. Before the war their consumption of that commodity was nearly 10 million tons, that is, 15 per cent of the total coal consumption of France, which had mounted at that time to nearly 61 million tons. And all this can give only an approximate idea of the rise in the cost of coal, for the prices paid by the railroads were much greater than these average prices, since they were obliged to import foreign coal for their use.

## INCREASES DURING THE WAR

Since the war these prices, as everyone knows, have increased enormously, as have the prices of metallurgical products, engines, rails and hoisting apparatus. The Paris-Lyons-Mediterranean Company, which spent in 1913 a little more than 55 million francs for its fuel, has seen that expense pass 170 millions in 1916, an increase of more than 200 per cent. The Paris-Orléans Company, which in 1913 spent 34 million francs for its coal, spent 91 million francs in 1916 for this one item. The amounts expended for coal in the two years compared, 1913 and 1916, have been for the other companies respectively: from 11 millions to 30 millions for the Compagnie du Midi and from 30 million francs to 100 millions for the State Lines. And during the present year this expense will be increased at least 30 per cent.

In the case of metallurgical products the increase in cost is also great. The price of rails has gone from 180 francs per ton before the war to 560 francs per ton in 1916; that of screws from 310 francs in 1913 to 1,225 francs in 1917, and bolts have risen in the same proportion. Even ties have doubled in cost and today cost 10 francs instead of five. A locomotive that cost 35,000 francs in 1913 now costs 145,000; a freight car with brake costs 17,300 francs instead of 5,000 francs.

As in the case of coal we must expect a still greater increase in the prices of all these products in 1917,

an increase that we know must be very great indeed.

To these expenses for supplies must be added the increases in salaries and wages of employees beyond those received before the war; expenditures for pensions since the passage of the law establishing them; and also the losses resulting to the railroads from the weekly rest day, the stricter regulation of working conditions and other improvements in the service for the benefit of the personnel. Since the war these expenses have advanced greatly because of increased difficulties in operation.

## DEFICITS SHOWN BY THE RAILROADS

All this is indicated by the figures which show the operating deficits. Figures, which were issued from the office of the Minister of Public Works on July 16, show these results in the following table:

DEFICITS RESULTING FROM THE OPERATION OF THE LARGE RAILROAD LINES IN 1916 AND THE PROBABLE DEFICITS IN THE YEAR 1917

Railroad	In 1916	Deficits in millions of francs		
		1st 4 months of 1917	Evaluation for 1917	Increase for 1917
État	150.5	..	234	83
Nord	97	51	138	41
Est	49	27	73	24
P.-L.-M.	33	45	100	77
Paris-Orléans	24	..	46	22
Total	353.5	123	591	247

From 353½ millions in 1916 the deficits will increase, according to estimates made by taking the first four months of the year as a base, to 591 million francs in 1917, that is, 247 millions more than in 1916.

The only remedy, the economical remedy, to apply to this state of affairs was an increase in rates for transportation. When a manufacturer finds that his cost of production is increasing and finally exceeds the selling price of the articles he manufactures, he raises the selling price. Railroad companies are not to be classed under the ordinary heads; they have not the liberty of making their rates. The concessionary companies work under a monopoly law and it seems very difficult for them to make any changes. This law of monopoly provides that rates shall be fixed by agreement with the State lines, the State lines having the deciding voice in the matter.

In view of the financial results shown by the operation of our railroads, especially since the war, results that we have just summed up in the table, the government proposed a measure having for its object an increase in the rates of transportation on the large systems. It is none too soon. One could even think that the government might have instituted this reform, which was known to be necessary even during 1916. From May 22 of this last year the companies and the management of the State Lines have begged for an increase in rates. The deficits resulting from railway operation must be provided for in the budget as the government is responsible for deficits and it is certainly not the proper time to allow the expenses of the budget to increase when they can be provided for in a normal way.

## GENERAL ADVANCES IN RATES IN EUROPE

We are the very last of all countries to come to this reform. It has been forced upon nearly all the European countries and even in the United States by reason of a general rise in prices. Many of them came to it before the war. Since then, the terrible conflict which has overturned economic life, not only in the belligerent countries but in the

\*Translation by the Bureau of Railway Economics.

neutral as well, has forced an increase in rates in every country. In Italy the rates increased twice in 1911 and another time, shortly before the war, in July, 1914, have been raised twice in 1916. Since 1912 Switzerland has been proceeding with increases in passenger tariffs; she continued it in 1914, 1916 and 1917, and at this time she is preparing to do the same with freight rates.

In Russia rates have been undergoing increases since 1902. In 1915 receipts from taxes on railroads produced 50 million rubles and in 1916 75 million rubles. A new increase of 15 per cent went into effect on January 1, 1917. At that time it was decided that the war tax should cease at the end of 1917. Now they are not only retaining this tax but the Minister of Finances recently proposed to the provisional government a tax on travelers and their baggage. It seems that the tax placed upon travelers before this one did not bring forth any serious complaints. It is now proposed to raise the present tax by 50 per cent, from which increase a supplementary yield of 75 million rubles is expected. The minister even asks for an increase in the tax on freight. In 1916 that tax yielded 143 million rubles and the proposed increase will bring, according to his estimate, 70 millions more.

In Holland certain passenger rates were increased in 1909 and freight rates in 1916. In Norway the same thing took place in 1913, 1915 and 1916. Sweden followed her neighbor during the last three years. In Germany the policy of exceptional tariffs was abolished and they are now about to raise the rates on the Prussian state railroads. According to the *Vossische Zeitung*, Herr von Breitenbach, minister of railroads, submitted to the Railway Council a project for increasing passenger rates 10 per cent. This famous system, which the advocates of government operation of railroads boast of as having made such great financial yields, has thus at last become a charge on the Prussian treasury. In Austria-Hungary freight rates were recently increased 30 per cent. England has also vastly increased her passenger rates. Finally, in the United States, freight rates began to increase in 1914 and continued upward in 1915; passenger rates were treated in the same way in 1916 and it is now announced that over there they are working out new increases. This series of examples might be continued by adding to the list Canada and Argentina in America and Denmark in Europe.

Let us recall briefly that in 1892 the government abolished the supplementary taxes placed on the payments for seats, on account of the necessities of the budget, as a result of the war of 1870-71 and did entirely away with the proportional taxes on fast freight shipments of packages, perishable foods and live stock. A clause in the agreements of 1883 had obliged the companies, in case the state should reduce the taxes on railroads, to put into effect on their side a proportional reduction in the cost of passenger transportation; but no agreement was entered into with respect to freight rates. Nevertheless, in 1892 the companies consented to notable reductions in freight rates. In fact, and especially in the case of fast freight, the transportation charge was reduced in France to an extremely low point, a point which could not be lowered much further. Altogether, railroad rates in France may be considered as very advantageous in comparison with those in the majority of countries, even in industrial countries where a denser movement of trains gives more traffic and higher receipts per mile. In France the railroads are operated by their companies in the most economical manner possible, as is shown by their operating ratios.

An increase would have taken place even if the war had not broken out and for this very great reason it is today impossible to avoid it. The rise in prices before the war, as we have said, would have brought on this reform for the good of the state, for two reasons: On account of the payments which it must make to guarantee the interest and on account of the needs of its own lines, whose working is so very expensive. So there could have been no opposition from

the government to the project which the government has just proposed. It is true that the syndicates of agents have been protesting against an increase in rates. They are afraid that the public will not see cause for such increases in the improvements in service and in the advantages which have been accorded to them for several years. It cannot be denied that expenses of this kind contribute heavily to the expenses of operation. Nevertheless, it must be admitted that in numerous cases increases in salaries have raised the cost of production and oblige the employer to raise the selling prices. To argue the contrary would be a sophism of the kind that one can read into the professions of political candidates who have recently been promising increases in the salaries of officeholders and reductions of taxes to the taxpayers, all at the same time.

#### ADVANCE OF 15 PER CENT PROPOSED

Let us now look at the government bill for raising rates and see what it consists of. The fundamental feature is very simple. An increase of 15 per cent would be made in transportation rates on the main lines and on the two Paris belt lines, under the following conditions: The increased rates can exceed the maximum rates provided for in the contracts and in the special agreements; they will go into effect on each line five days after the modification has been published by means of posters. Packages sent by post within the country are also subject to the increase. The additional charges on private branch lines can exceed the maximum charges fixed by the contracts with the public.

What will be the effect of this increase of 15 per cent? M. Henry Roy in his report on the subject presents a graphic demonstration. As for the actual price of commodities the increase of 15 per cent will hardly be felt. If 100 kilograms be taken as a unit of weight the increased charge for coal would amount to .095 francs, for steel bars .165 francs, for rails .168 francs, for superphosphates .107, for beef .58 (100 kilos net), for cereals .15 francs. Thus, on a hundred-weight of wheat at 50 francs the increase in the rate would be .003 francs, or 3 millimes the franc.

Other calculations show that the surcharge for coal per ton would be only .92 francs and for commodities coming from Provence to Paris by fast freight the increase would be from 1.5 to 2 centimes per kilogram. In short, if a general average be taken it is evident that if the average rate per kilometric ton in 1912 was 4.20 centimes, the addition of 15 per cent brings it to 4.83 centimes. Up to 1886 the charge was hardly ever below 6 centimes, and in 1897 the rate was at the point to which we are returning by the present reform.

But this is not all. In respect to the relations of the companies toward the state there are additional conditions concerning the increased rate in the agreement which is appended to the proposed law.

Naturally, this agreement repeats that arrangement of the first article of the project which has to do with the 15 per cent increase. The proceeds of the increase ought to permit the state lines to meet their financial obligations as determined by the law of July 13, 1911. The same will be true for the concessionary lines as regards, first, the matter of interest on bonds, dividends on stock, amortization, and second, the payment of their debt.

While hostilities are going on and in the year which follows their cessation a fund will be made of the total increase in the income of the companies which accept the agreement. This fund will be distributed according to the following plan: The operating ratio of each company in 1913, the latest normal year, will be taken as a base. The excess of expenses for each year above the ratio of 1913 will be ascertained for each company and the capital fund will be distributed proportionately to that excess for each one of them.

This system of mutuality will cease after the period of

time indicated above. Each line will then retain the proceeds of the increase which it collects and these proceeds will serve to cover the deficits of the line and to pay off, if they are sufficient, the debt to the state owed by each line through the guaranty of interest. This debt once entirely paid off, the line will keep only three-tenths of the excess produced by the increase and the other seven-tenths will be distributed among the others according to their receipts. The Northern Railway and the Belt lines will not participate in this distribution, which is already known in railway history under the name of "déversoir." These two lines will retain the proceeds of the increase; they will not turn them into the common fund.

#### PROVISION FOR FUTURE REDUCTIONS OF RATES

Provision has been made for lowering the increased rates. They will be lowered to 10 per cent on all the lines when, after three consecutive years, two lines other than the Belt lines shall have had a surplus to divert to other lines, and the actual increase will be reduced to 5 per cent if two lines have had surpluses to divert two other years in like manner. Finally, they will be abolished if the same condition presents itself in two other successive years.

There is a modification in the clauses concerning the sharing of benefits in the agreements of 1883. According to these agreements the revenues of a system remain with the company up to a certain figure if the debts, in which are included the payments on capital interest and liquidation, are paid off. If this figure is exceeded the state shares with the company. There is no such provision in the new agreement. As soon as there is a surplus, after all debts are paid, it is to be divided between the state and the company. We

must remember that the Northern Railway Company is not in this agreement.

What will be the effect of this increase of 15 per cent? From the point of view of the cost of commodities transported we saw above that it will not have a perceptible influence on their prices, being so small in comparison. Let us note here that in making a uniform increase of rates without changing the bases on which they were fixed, the operation of these rates on prices remains the same as before, no exceptional nor special tarification being introduced.

As regards the effects of the increase on the receipts of the lines, it has been estimated that they would amount to 300 million francs. Now we have seen above that the deficits in receipts reached 591 millions in 1917, or 600 millions in round numbers. This increase of 15 per cent is then absolutely insufficient during the war. It has not even been suggested that it could cover the deficits of these exceptional years. But in our opinion it is not enough to attain the desired result after the war is over. Surely there will be, let us hope, a redoubling of economic activity, which will increase business and traffic on our railways. Nevertheless, we can not ignore the fact that operating expenses increase with the increase of traffic and operating expenses will continue to increase for many years after the cessation of hostilities. So one must be somewhat sceptical of the optimistic views of the results of this increase of rates. In the previous agreements too much has been expected from future developments, and here again in the present circumstances it seems that too much confidence is being felt. However, it will be necessary to take up the question of railroads on larger grounds after the war, for too many financial problems will then force us to do so.

## Immediate Relief Recommended for the Railroads

### Interstate Commerce Commission Sends Special Message to Congress. Commissioner McChord for Radical Action

DECARING that absolute unification in the operation of the railroads during the war is indispensable to their fullest utilization for the national defense and welfare, and that the act to regulate commerce was not designed to meet such an abnormal situation as now exists, the Interstate Commerce Commission on Wednesday made public a special report to Congress recommending that unification of the American railway systems be effected, either by the carriers themselves, with the assistance of the government, or by their operation by the President as a unit during the war, with a guarantee of an adequate annual return. The railroads' proposal that their rates be increased the commission regards as an impracticable solution of the difficulty.

"If the unification is to be effected by the carriers," says the commission, "they should be enabled to effect it in a lawful way by the suspension, during the period of the war, of the operation of the anti-trust laws, except in respect of consolidations or mergers, and of the anti-pool provision of the commerce act. In addition, they should be provided from the government treasury with financial assistance in the form of loans, or advances for capital purposes, in such amounts, on such conditions and under such supervision of expenditure as may be determined by appropriate authority.

"If the other alternative be adopted," says the report, "and the president operates the railroads as a unit during the period of the war, there should be suitable guaranty to each carrier of an adequate annual return for use of the property, as well as of its upkeep and maintenance during operation; with provision for fair terms on which improvements and betterments, made by the president during the period of his operation, could be paid for by the carrier upon

return to it of the property after expiration of that period."

Commissioner McChord filed a separate report, disagreeing with the position of the majority that unification may be effected by the carriers themselves, and declaring that "the supreme arm of governmental authority is essential," either by exercise of the president's authority to operate the roads or by the creation of a single governmental administration control.

In the majority report the commission says: "The act to regulate commerce requires the commission to transmit to the Congress such recommendations as to additional legislation relating to regulation of commerce as the commission may deem necessary. Under this mandate the commission submits the following special report, supplementing its annual report, with reference to transportation conditions as affecting and affected by the war. . . . The railroads of the country came into being under the stimulus of competition; from the outset their operation and development have been responsive to a competition which has grown with the growth of population and industry. This competitive influence has been jealously guarded and fostered by state laws and constitutions, as well as by the federal law. The keenness of rivalry naturally drew to the front those who were quick to seize and resolute to retain every point of vantage for their respective roads. Terminals, if confined to the owner's exclusive use, were not only of strategic importance but profit-yielding assets. Out of competition grew rate wars, pooling, mergers, and consolidation into systems; as well as rebating and other preferential treatment of shippers, which the act to regulate commerce was primarily framed to prevent.

"In that act the congress, accepting the competitive prin-

inciple as salutary, has thrown about it prohibitions against compacts for the pooling of freights or divisions of earnings of different and competing railroads and, while the original act is but the nucleus of the act we now administer, that prohibition has remained unchanged. The original act and the successive amendments were alike framed in times of peace and for times of peace. They looked to protection of the shipper and the public against unjust or unfair treatment by the carrier, and not to protection of the nation and its commerce in time of war by utilization of all the forces and resources of its transportation systems to their fullest extent.

"Since the outbreak of the war in Europe, and especially since this country was drawn into that war, it has become increasingly clear that unification in the operation of our railroads during the period of conflict is indispensable to their fullest utilization for the national defense and welfare. They must be drawn, like the individual, from the pursuits of peace and mobilized to win the war. This unification can be effected in one of two ways, and we see but two. The first is operation as a unit by the carriers themselves. In the effort along this line initiated early in this year they are restricted by state and federal law; and the idea is the antithesis of that which heretofore has controlled their activities. Their past operations have been competitive, although since the Hepburn act, and especially since the Mann-Elkins act, the prescription by this commission of reasonable maximum rates and charges for rail carriers subject to the act and the exercise of its power to require abatement of unjust discrimination or undue prejudice have in great degree restricted that competition to the field of service; but whether or not perpetuation of the competitive influence is desirable under a system of governmental regulation, it is apparent that operation of our railroads as a unit involves the surrender, by each of them, of exclusive use of terminal facilities; surrender, at times, of profitable traffic to other carriers, and acceptance of less profitable traffic with resultant loss of revenue, whenever economy of movement or greater freedom from congestion would dictate that course if the various carriers were in fact one system. The alternative is operation as a unit by the president during the period of the war, as a war measure, under the war powers vested in him by the constitution and those powers which have been or may be conferred by the congress.

"As bearing upon the alternatives thus stated it will be recalled that since the beginning of the war, in 1914, the traffic offered to and moved by the railroads has increased enormously. Prior thereto there had been occasional periods of car shortage, usually restricted in territory; but it may be said that from 1907 down to 1916 the number of cars in the country exceeded the demand. This subject is treated in our annual report. The sudden, unforeseen and unprecedented demand for transportation occasioned by the war placed a strain upon the facilities and equipments of the railroads which they were not and are not prepared to meet. There was created a need for immediate and extensive additions to existing facilities and equipment. This need is coincident with demands upon capital, as well as upon labor, manufacturers and natural resources, such as we have never before known. Important additions and betterments will require new capital.

"The railroads propose essentially that we allow increases in freight rates of such magnitude that their increased earnings will attract investors, by dividends declared or by the prospect of dividends, in competition with securities issued by federal, state, and municipal governments, public utility corporations, and industries organized and operating primarily for gain as distinguished from public service. Some of the latter have yielded large profits since the outbreak of the war.

"An attempt to secure new capital would come at a time when the rising cost of living has made it difficult for those dependent for support upon their earnings to meet their cur-

rent expenses; after the absorption by American capital of two-thirds of the American securities owned abroad prior to August 1, 1914, the railroad securities returned to this country alone amounting to from \$1,700,000,000 to \$2,000,000,000; after financing in this country of loans to our present Allies, and after subscriptions for almost \$6,000,000,000 for Liberty Loan bonds. Even if the railroads have more money, the immediate construction of necessary facilities and equipment could not readily be effected.

"Labor is scarce and the cost of labor and supplies is mounting. Car and locomotive builders are largely engaged in producing equipment needed abroad, both by our Allies and by our own forces. The steel and other materials needed for such construction, as well as the labor, are also needed in other phases of the conflict. Under such conditions and pending the acquisition of such additional facilities and equipment it is indispensable that those now in existence should be used to their fullest capacity; primarily for the uses which are most vitally needed for the country's defense and welfare, but without unnecessary hindrance to the industry and commerce of our people, upon which their ability to contribute toward the success of the war so largely depends.

"The act to regulate commerce was not enacted to meet such a situation. The carriers have the right to demand at our hands, and it is our duty to approve, just and reasonable rates sufficient to yield fair returns upon the value of the property devoted to public use after necessary expenditures for wages, fuel and supplies, reasonable expenditures for maintenance, renewals and betterments properly chargeable to operating expenses, and appropriate depreciation. Measured in dollars, the gross revenues of the carriers during the past and current fiscal years exceed any in their history, but what the dollar will buy in labor, material, and supplies is substantially less.

"We are sensible of the vital and imperative need of the hour that our railroads shall not be permitted to become less efficient or less sufficient. We realize the gravity of a serious breakdown of our transportation facilities. It is unthinkable that this breakdown would be permitted if it could be prevented. Increased charges for carriage, if found necessary to take care of unavoidable increases in operating expenses, would not at this time bring new capital on reasonable terms in important sums. In our opinion the situation does not permit of temporizing. All energies must be devoted to bringing the war to a successful conclusion, and to that end it is necessary that our transportation systems be placed and kept on the plane of highest efficiency. This is only assured through unification of their operation during the period of the war.

"The regulation of security issues of common carriers engaged in interstate commerce should be vested in some appropriate body, as has been recommended in our annual reports. The rights of shippers for reasonable rates and non-discriminatory service under the present jurisdiction of the commission need not be seriously interfered with by such unified control. Some elastic provisions for establishment of through routes would probably be needed."

Commissioner McChord, in his separate report, says that the railroads' war board is the fifth committee which the railroads have had in Washington to deal with the transportation situation since November, 1916. He does not wish to be understood as saying that the carriers' committee has not accomplished results, but he is led to the belief that no voluntary committee can accomplish what the situation demands. The unification needed, he says, is the unification of the present diversified governmental control. If the president does not elect to take over the roads, the authority now vested in the several governmental agencies should be centralized by act of congress.

Commissioner McChord's minority report will be published in full next week.

# General News Department

The members and employees of the Interstate Commerce Commission have subscribed funds to present two ambulances to the Red Cross.

The telegraphers of the Philadelphia & Reading have had their pay raised about 6 per cent. It is said that 1,000 employees share in this increase.

W. G. Brantley, counsel for the Southern group, Presidents' Conference Committee on Valuation, has filed a brief and argument of 737 pages in support of the protest of the Atlanta, Birmingham & Atlantic against the tentative valuation of its property made by the Bureau of Valuation of the Interstate Commerce Commission.

The Great Northern has purchased from the Western Union Telegraph Company all telegraph lines along its right-of-way which it had not already owned, amounting to about 3,385 miles of pole lines. The Western Union has made a new contract with the railroad under which it will continue to operate over the Great Northern lines.

The Interstate Commerce Commission has announced a hearing at Washington on January 4 on the application of certain companies for a further extension of the period within which railroads shall be required to comply with the provision of section 3 of the safety appliance act of April 14, 1910, with respect to the equipment of freight cars.

Gold medals bearing the Southern Pacific safety emblem and suitably engraved were awarded recently to the six employees of each division and in each general shop of the Pacific system who, during the year ended June 30, 1917, did the most in furtherance of safety work. C. H. Rippon, piecework inspector of the Sacramento general shops, carried off the first prize for the second successive time.

So far, 193 employees of the Nashville, Chattanooga & St. Louis have enlisted in the army or navy, while 1,449 others are subject to draft. Of the enlisted men, there is one each from the executive, the legal and the purchasing department; five from the traffic, 12 from the accounting and 170 from the operating department; two from the agricultural department and one from the department of safety.

The Southern Pacific Company has recently made extensive additions to its telegraph lines, including a copper wire circuit from Houston, Tex., to El Paso; but in connection with the announcement of this improvement, the company's monthly circular to station agents reiterates the injunction that telegrams should be made as short as possible, and that the wires should not be used for communications which can be sent by letter.

The Erie Railroad Magazine, with its December number, issues a 22-page supplement containing the names of all of the 974 employees of the company now in the army or the navy, or other war service. With each name is given the man's residence, his railroad occupation and whether he is serving in the army or the navy. The cover of the supplement is in three colors, red, white and blue, and bears a representation of a service flag containing 974 stars.

The Commission on Car Service, with the approval of the Railroads' War Board, has directed that the rate of 60 cents a day on interchanged freight cars, which would expire by limitation on January 1, be extended to February 28. The commission has also ordered the cancellation of car service rule 4, which provides that an empty car, at a junction point with its home road, must be delivered to that road, at that point, either loaded or empty.

Action was taken by the United States Fuel Administration on December 3 to provide an increased supply of coal cars and an increased supply of bituminous coal for the Southern Railway and its operated lines. The order provides that coal operators under contract to the Southern and its operated companies shall

fill the fuel contract requirements, in so far as possible, in equal daily quantities. Orders of this character in favor of the Lehigh Valley, the Chesapeake & Ohio and the New York, New Haven & Hartford were noted last week, page 1007.

## Newlands Hearing Postponed

The hearing before the Newlands Joint Committee on Interstate Commerce, announced to be held at Washington on December 4, has been postponed at least until December 10.

## Southern Pacific Starts Fire Protection Campaign

The Southern Pacific is launching a vigorous campaign of fire protection throughout its system, and the 45,000 employees are being asked to spread the gospel among shippers, warehousemen and others. General Manager W. R. Scott in a circular says: "The responsibility of feeding not only ourselves, but our allies, rests largely upon this nation. As all the materials, supplies and food-stuffs necessary for our domestic use, the use of our armies and our navy must be transported over our railways, the necessity for fire protection becomes a patriotic duty. No amount of insurance can replace food and materials that are destroyed."

## Industrial Unrest in Great Britain

The Bureau of Labor Statistics, Washington, has issued a bulletin, No. 237, giving a reprint of the report of the British Commission of Inquiry Into Industrial Unrest. The report is presented in eight sections, showing the results of inquiries in eight separate districts of Great Britain. The reports for all the districts emphasize as the leading cause of industrial unrest the fact that the cost of living has increased disproportionately to the advance in wages and that food distribution is unequal. Another cause regarded as particularly serious is the restriction of personal freedom under the Munitions of War Acts, by which workmen have been tied up to particular factories and have been unable to obtain wages in proportion to their skill; in many cases the skilled man's wages were less than those of the unskilled. Dilution of labor and lack of confidence in the Government, growing out of the surrender of trade-union customs and the fear that promises regarding the restoration of pre-war conditions will not be kept, are mentioned. All the reports refer to the lack of co-ordination between Government departments in dealing with labor. Mention is also made of lack of proper organization among the unions, inconsiderate treatment of women as regards wages, delay in granting pensions to soldiers, and inadequacy of compensation under the Workmen's Compensation Act.

## Optimism at Ottawa

The Railroads' War Board of Canada, otherwise known as the Canadian Railway Association, is quoted as declaring that the Canadian railways have made a reduction of over 10,000,000 passenger train miles (per annum), which is a greater proportionate reduction than has been made in the United States.

The association further states that "Canada is today getting the best and cheapest railway service in the western world; in spite of car shortage created by the abnormal balance of south-bound over north-bound traffic, in spite of war requirements, higher labor charges, the necessity of importing coal for engines and the lower efficiency of the coal due to lower winter temperatures in Canada, there is a greater degree of efficiency reached in the operation of the Canadian railways than anywhere else in the New World."

"Car shortage is being reduced day by day. The percentage of freight cars out of service for repairs in Canada is lower than the percentage on United States roads and the average cost to the Canadian traveler or shipper is less."

"For the year ending June 13, 1916, the charge for moving an average ton of freight one mile in the United States was 7.16 mills. In Canada it was 6.53 mills. In the United States the

average passenger mile cost the passenger 2.006 cents and in Canada it cost him 1.954 cents. At the same time the Canadian railroads paid more for labor than any of the other roads on this continent."

#### Railway Regiments' Tobacco Fund

Fifteen more supply companies have made contributions to the tobacco fund for the American railway engineers who have been making history for themselves this last week in France. The following list brings the total to date on Tuesday noon:

American Arch Co., New York (to cover 15 months).....	\$150.00
Chambers Valve Co., New York.....	\$5 a month
Elliott Frog & Switch Co., East St. Louis, Ill.....	10 a month
Fairbanks, Morse & Co., Chicago.....	10 a month
Joliet Railway Supply Co., Chicago.....	10 a month
Kerite Insulated Wire & Cable Co., New York.....	10 a month
Keystone Grinder & Mfg. Co., Pittsburgh, Pa.....	10 a month
Laas & Sponburg Co., Chicago.....	10 a month
Laconia Car Co., Laconia, N. H.....	10 a month
C. F. Massey Co., Chicago.....	10 a month
Ottenheimer & Co., Chicago.....	10 a month
Republic Rubber Co., New York.....	10 a month
Steel Car Forge Co., Pittsburgh, Pa.....	10 a month
Union Draft Gear Co., Chicago (to cover 6 months).....	\$60.00
Westinghouse Air Brake Co., Pittsburgh, Pa.....	10 a month

#### Public Ownership Conference at Chicago

Resolutions demanding the immediate public ownership and control by the federal government of the railroads, the coal mining industry and the telegraph and telephone systems of the nation were passed at the conclusion of the National Public Ownership Conference held at Hotel LaSalle, Chicago, last week. The members of the committee on resolutions included David J. Lewis of the federal tariff commission, J. W. Brown of the United Mine Workers of America, Frank C. Perkins of Buffalo, John C. Kennedy, socialist alderman, Chicago, and Homer Talbot, secretary of the League of Kansas Municipalities. Prof. Charles Zueblin was the chief speaker in favor of government ownership of railways, although he said that existing conditions make it undesirable even to discuss the question of government ownership at this time. He spoke of the necessity of organization and unification to win the war for democracy, at the same time criticizing all concerned for not having made the railroads public property long since.

#### Railroad Telegraph and Telephone Men Organize for Service in France

Two battalions are now being organized at the Consumers' building, Chicago, for service in the telephone and telegraph departments of the railroads now being operated by American railway regiments in France. The recruiting is being carried on under the supervision of Colonel Leonard B. Wildman, of the signal corps of the regular army. Each battalion will have the following organization: (1) One major (superintendent of telegraph); first lieutenant, adjutant (assistant superintendent and chairman of discipline board); first sergeant, acting sergeant major (chief clerk of office); three privates, attached to headquarters as orderlies and drivers (junior clerks and messengers). (2) Supply detachment—one first lieutenant, supply officer (electrical engineer in charge of supplies); one sergeant, battalion supply sergeant (supplies accountant); four privates, first class, clerks and drivers. (3) Two telegraph companies, each of which will be organized as follows: One captain (division operator); two first lieutenants (assistant division operators); two master signal electricians (one wire chief and one supervisor of signals); seven sergeants, first class (four train despatchers, one foreman telegraph and telephone linemen and maintainers, one foreman of signals, one instructor and examiner of train rules); 11 sergeants (seven in charge of more important towers and offices; two assistant foremen telegraph and telephone linemen and maintainers; two assistant foremen of signals); 17 corporals (nine towermen and operators, three telegraph and telephone maintainers, five signal maintainers); two cooks; one horseshoer (mechanic); 48 privates, first class (33 telegraphers, six telegraph linemen and maintainers, eight signal maintainers, one barber); 12 privates (five telegraphers, four telegraph linemen and maintainers, three signal maintainers).

The two battalions now being organized in Chicago are headed by Major Frank W. Sherwood, for 19 years in military service, and at one time manager and wire chief on the Western Union

Telegraph Company and an operator on the Chicago & North Western, and by Major P. Kirk Pierce, of Grand Rapids, Mich., superintendent of telegraph of the Pere Marquette. The roster of the officers of the 415th railway telegraph battalion, which is under Major Sherwood's command, is as follows: First lieutenant, E. M. Harding, adjutant, banker at Chicago and formerly agent of the Texas Company at St. Louis, Mo.; first lieutenant, A. E. Manheimer, supply officer; captain, William H. Mann, for the past nine years with Ware & Leland, grain and stock brokers, Chicago and New York, and with previous telegraph experience with the Western Union, the Louisville & Nashville and other roads; first lieutenant, Charles H. Martin, electrician and general wire chief, Chicago & North Western; first lieutenant, Charles S. Pack, train despatcher, Illinois Central; captain, M. A. Loosley, electrical engineer, with 19 years' army experience; first lieutenant, G. Z. Flanders, trainmaster on the Wisconsin division on the Chicago & North Western; first lieutenant, Robert M. Phinney, assistant engineer, signal department, Chicago & North Western.

The complement of officers of the 416th railway telegraph battalion, under the command of Major Pierce, has not yet been filled. Two similar battalions are now being organized in New York.

#### Trainmen's Demand for Higher Wages

The brotherhoods of conductors and of brakemen on December 1 presented their request for a general increase of wages to all of the railroads throughout the country in accordance with the previous announcement in the newspapers. The proposed rates for passenger trainmen are as follows:

On runs of 155 miles or less per day: Conductors, not less than 3.5 cents a mile, \$5.43 a day, or \$162.90 a month. Ticket collectors, not less than 3 cents a mile, \$4.65 a day, or \$139.50 a month. Baggage electricians, not less than 2.9 cents a mile, \$4.50 a day, or \$135 a month. Baggage men, not less than 2.5 cents a mile, \$3.88 a day, or \$116.40 a month. Flagmen and brakemen, not less than 2.33 cents a mile, \$3.61 a day, or \$108.30 a month.

The schedule contains the usual provisions for short runs, overtime, etc., overtime in all passenger service to be not less per hour than one-eighth of the daily rate.

The proposed rates for freight service are as follows:

"Through and irregular freight, snow plough and circus trains: Conductors, .053 a mile; flagmen and brakemen, .0381 a mile. For yard crews, the rates contain the usual differences for night work, and are: Conductors or foremen, \$5.30 a day and \$5.50 a night. Brakemen or helpers, \$5 a day and \$5.20 a night. Eight hours or less to constitute a day's work; overtime pro rata; actual minutes to be counted."

#### Electric Roads Organize to Handle Freight

At the suggestion of Daniel Willard of the Council of National Defense urging the complete co-operation of all transportation agencies during the continuance of the war, the American Electric Railway War Board, recently organized, is planning to assist the steam railroads in the movement of freight. It is believed that the existing facilities of the 40,000 miles of electric roads in the country can be used advantageously as auxiliaries to the steam lines.

A sub-committee on traffic and transportation has been appointed, with a member representing each state, to investigate the possibilities of the electric lines as freight carriers. B. I. Budd, president of the Chicago, North Shore & Milwaukee and the Chicago Elevated Railways, and chairman of this committee, states that the electric roads will be of service (1) in moving light merchandise and foodstuffs in and out of large cities for distances of from 50 to 100 miles; (2) in moving freight around congested terminals either in combination with steam roads or with other electric lines; (3) by relieving the steam lines of more short haul passenger traffic, thereby releasing engines and cars for the movement of freight on the steam lines. Electric roads in Ohio, Indiana, Illinois, Wisconsin and Michigan have already federated into a Central Electric Freight Association which is assembling statistics with reference to connections, clearances, rolling stock, rates and routes, to facilitate the movement of freight from one line to another. The American Electric Railways' War Board will have a joint meeting with the Railroads' War Board in the near future to determine how the two classes of carriers shall co-operate in handling freight traffic.

At the present time the Chicago, North Shore & Milwaukee is interchanging freight daily with the Elgin, Joliet & Eastern at Rondout, Ill. The Chicago, Lake Shore & South Bend is handling through freight business between Chicago and South Bend, Ind., daily, a distance of about 85 miles. Arrangements have recently been perfected for the movement of freight from Chicago to Rockford, Ill., about 100 miles, over the Aurora, Elgin & Chicago, the Elgin & Belvidere and the Rockford & Interurban. Illustrative of the service which the electric lines are able to give, freight loaded at Chicago in the evening arrives at Indianapolis the next morning at 9 o'clock. Through freight and passenger services are now in operation between Detroit, Mich., and Columbus, Ohio, about 235 miles; between Detroit and Dayton, Ohio, about 220 miles; between Cleveland, Ohio, and Lima, about 150 miles; and between Toledo, Ohio, and Cincinnati, about 250 miles. The longest through freight and passenger line in this territory is between Terre Haute, Ind., and Zanesville, Ohio, about 325 miles, which the passenger trains cover in 11 hours.

The rates for freight on the electric roads are generally higher than those on the steam roads because the electric lines are not built or equipped to handle freight as economically as are the steam roads.

#### Shop Crafts Federate to Press Demands

The various shop crafts on the railroads north, south and west of Chicago, including the Chicago & Eastern Illinois, the Illinois Central, the Chicago & Alton and the Wabash, have federated into one body and have distributed ballots among the members to determine what action shall be taken on the following proposed demands: (1) \$5 for a day of 8 hours for machinists, blacksmiths, boilermakers, sheet metal workers and electricians; (2) \$4.50 per day of 8 hours for car men, including pattern makers, cabinet makers, coach and locomotive carpenters, upholsterers, painters, varnishers, letterers and mill machine operators in planing mills; (3) \$3.50 per day of 8 hours for the first 6 months and \$4 thereafter for all other car men; (4) \$3.50 per day of 8 hours for helpers in all crafts; (5) for regular apprentices, 20 cents an hour for the first six months and an increase of 2½ cents per hour for each six months thereafter for the first three years, a 5-cent an hour increase for the first 6 months of the fourth year and 7½ cents for the last six months of the fourth year; (6) helper apprentices to start at the minimum wage for helpers for the first 6 months and to receive an increase of 2½ cents per hour for each six months until the time of apprenticeship has been served; (7) foremen and men employed by the month to receive a minimum increase of \$20 a month.

No member of a shop craft is to receive an increase of less than 10 cents an hour except apprentices. The ballots are returnable by December 10 and a general meeting of the federation will be held on January 4, 1918.

#### N. Y. C. Freight Tracks in New York City

The New York State Public Service Commission, first district, has begun the preparation of plans for the reconstruction of the line of the New York Central on the west side of New York City from Spuyten Duyvil southward to Canal street, about 12 miles, with a view to ordering the elevation or depression of the tracks at all points where necessary to secure the safety of street traffic.

Certain powers of the New York City government in connection with the regulation of these tracks ceased on December 1 by virtue of an act passed by the last legislature; and the elaborate plan for carrying out the proposed changes, involving many millions of dollars, which was agreed upon between the city government and the railroad company, after several years' costly studies and negotiations, is now, by this action of the legislature, virtually rejected.

In this rejection the legislature carries out the wishes of certain interests in the city, opposed to the city government, whose aim it is to deprive the railroad company of certain rights in its roadbed which it has possessed for seventy years; and to so limit any grants which the city may make, in connection with the proposed changes, that no right of way on or over public property shall be held by the railroad company except on condition that the rate of compensation shall be subject to readjustment every 25 years.

The railroad company, which, at great expense, had made prep-

arations for the proposed changes and which, by the agreement that was made with the city, was to increase its investments in property in the city by some fifty millions of dollars, is expected to oppose, in the courts, the attempt of the state authorities to modify what has been understood to be a perpetual franchise.

#### Interline Way Billing

The president of the Association of American Railway Accounting Officers has issued a circular dated December 4 in part as follows:

This association, through its appropriate committees and through the individual efforts of some of its members, has for years past strenuously advocated the general adoption of through interline waybilling.

That the action taken by you at the last meeting of the association has borne fruit is evidenced in bulletin No. 42 issued by that executive committee [the War Board] in which an appeal to increase the efficiency of the railroads is made. From it I quote the following:

"Start a systematic, vigorous campaign to provide universal interline waybilling, a study of the operation of which on one large system convinces us will result not only in a large money saving, but in saving 12 to 18 hours' time on cars and the continuous services of one switch engine, handling setbacks account 'no billing,' at each representative terminal."

The part the accounting officer can and should take in this campaign is of prime importance and I am quite sure if we will carefully prepare, based on data obtainable from division superintendents and other officers as well as that available in our own offices, estimates of the possible advantages to be gained from the proposed innovation, the results would go a long way in making universal interline waybilling a possibility.

Let me suggest that we, each of us, endeavor to ascertain estimates of what results would follow if all intermediate inter-road rebilling were abolished. Such estimates should show:

- (1) Clerical costs saved at agencies.
- (2) Approximate saving in car days, because of ability to move cars in continuous movements.
- (3) Approximate saving in switching costs by reason of discontinuance of double movement of cars awaiting revenue waybilling.

(4) Overcharges are generally reclaimed. If they occur can we not assume that there are an equal amount of undetermined undercharges and would not universal interline waybilling avoid many such? If yes,

- (a) What saving would be effected by eliminated undetermined undercharges?
- (b) Could you reduce freight agency cost? If so, how much?
- (c) What effect would such waybilling have on loss and damage claims? Are not losses occasioned by errors made in rebilling?

The foregoing are some of the things we can look into; there may be others.

After making your estimates, advise your chief executive and your traffic officer of them.

#### Railroads Not Only Industry Pressed by War Demands

In an address before the Peoria (Ill.) Transportation Club on December 5, R. H. Aiston, president of the Chicago & North Western and chairman of the Central Department Committee of the Railroads' War Board, reminded his hearers that the freight situation is just as unsatisfactory to the railroads as to the shippers. During 90 per cent of the time between the years 1907 and 1916 there were surpluses of freight cars ranging as high as 400,000 cars, and as late as August, 1915, the surplus was 250,000 cars. When our own country became involved in war the railroad managers immediately realized that there would be thrust upon them a gigantic task and they took heroic steps to meet the issue by forming the Railroads' War Board and co-ordinating their efforts, with what wonderful results is well known. Continuing, he said:

"Some people think the results accomplished by the railroads under this one directing body an argument for government ownership, but the vast transportation interests of this country could have done no more nor accomplished any more efficient results if they were owned by the government, or by anybody else. Furthermore, our government at this time has plenty of

vast problems to solve without adding the transportation system to its burden.

"The railroads are not the only industry in the country that cannot meet the demands on it. The farmer cannot produce all the grain and livestock needed to feed our people and our allies. The mines are not producing all the coal required. The steel industry's output is not equal to the demand from the government and private concerns; the railroads are obliged to get along without rails, cars and locomotives which they greatly need. . . ."

#### A Railroad President's Experiences

The New York American prints a column interview with Charles S. Mellen, former president of the New York, New Haven & Hartford, in which Mr. Mellen gives his views on government ownership of railroads and other things. He says that the managers of roads, the employees, the public and the stockholders are all dissatisfied. All have just grievances, and there is no possible solution except government ownership. Continuing, he said:

"Railroad employees are entitled to more pay. Advances in wages have not kept pace with the increases in the cost of necessities. It is going to take something like the strong arm of the Government to deal with the army of railroad employees. Under Government ownership there will be no more strikes on the railroads than there are in the army and navy, or post office. In fairness to the railroads, let it be said that, while they are restricted as to the amount they can charge for service, there is apparently no roof to the prices they must pay.

"The great government which trains men at West Point and Annapolis for the Army and the Navy can train men to run the railroads. Five years ago I thought the public altogether too impatient. Today I wonder at its patience!

"Why is it that when a man becomes rich in the grocery or banking business nothing else will do but he must become a director in a railroad? . . . I believe the government will make a success of railroading. The Naval Academy at Annapolis and the Military Academy at West Point will continue to turn out men trained in the handling of men. A good place to keep these men busy in times of peace will be the government-owned railroads. I understand very well that one of the stock objections to government ownership is that there will be too much graft. There will be no more in the government service than there is today. Is that a strong statement? Get a list of the railroad directors of America. See how many of them have their friends, and their sons, and their friends' sons, or other relatives, in good positions on the railroads. Many of them have been railroad directors for no other purpose!

"Moreover, the banker who sits on the board of directors of a railroad, who participates in any syndicate controlling the new securities of that road, should be compelled to buy the securities on the terms offered to all other bankers. The terms should never be secret. As it is today, one set of bankers refuses to interfere with the graft of another set of bankers. It is all secret and everything is done under a gentlemen's agreement. I have seen the terms of a certain proposed loan discussed by the board of directors of a railroad, even before the loan itself was authorized. There must be radical revision in our requirements of railroad directors. The director must not be permitted to dodge his responsibility by the plea, when things go wrong, that he depended upon this man or that man; that he employed an expert and trusted him implicitly.

"Two-thirds of the plans and schemes of railroad boards never originate with railroad presidents at all. They originate in the board, and if they are apparently proposed by the president it is because some director with power has asked him to do so.

"Will big railroad men be glad to work for Uncle Sam? Why not? It will be infinitely better than working for a coterie of bankers. Under government ownership there will not be so much politics in the conduct of our railroads as there is today. There will be no more nepotism. There will not be any more graft. I do not apprehend any great difficulty, although it is likely that many railroad presidents will have their salaries reduced. The people will hardly stand for paying their railroad presidents a salary larger than that of the President of the United States. But lower salaries for railroad presidents will not be an unmitigated evil.

"Those who oppose government ownership say the managers of the roads would be susceptible to influence by members of

Congress, or members of the Cabinet. That there will be some influence of this sort is likely true, but it will not be a flea bite to the influence exerted today by railroad directors—directors who do not direct but who, because of their great wealth and the great wealth they represent, have the power to get things through.

"Under government ownership I believe the railroads of the United States will be run with more of an eye to efficiency and with a smaller degree of subserviency to one thousand and one masters than is the case today. . . ."

#### Western Railway Club

The Western Railway Club will hold a meeting on December 17 at the Hotel Sherman, Chicago. W. J. Bohan, mechanical engineer on the Northern Pacific, will present a paper on "The Box Car," and A. M. Schoyer, resident vice-president of the Pennsylvania Lines at Chicago, will speak informally.

#### American Society of Civil Engineers

The sixty-fifth annual meeting of the American Society of Civil Engineers will be held at the new headquarters of the society, 33 West 39th street, New York, on January 16-17, 1918. Annual reports will be read, officers will be elected for the ensuing year and other business will be transacted.

#### MEETINGS AND CONVENTIONS

*The following list gives names of secretaries, dates of next or regular meetings and places of meetings:*

- AIR BRAKE ASSOCIATION.—F. M. Nellis, Room 3014, 165 Broadway, New York City.
- AMERICAN ASSOCIATION OF DEMURRAGE OFFICERS.—F. A. Pontious, 455 Grand Central Station, Chicago.
- AMERICAN ASSOCIATION OF DINING CAR SUPERINTENDENTS.—H. C. Boardman, D. L. & W., Hoboken, N. J.
- AMERICAN ASSOCIATION OF FREIGHT AGENTS.—R. O. Wells, Illinois Central, Chicago, Ill.
- AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York.
- AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—E. H. Harman, Room 101, Union Station, St. Louis, Mo.
- AMERICAN ELECTRIC RAILWAY ASSOCIATION.—E. B. Burritt, 8 W. 40th St., New York.
- AMERICAN ELECTRIC RAILWAY MANUFACTURERS' ASSOCIATION.—Fred C. J. Dell, 165 Broadway, New York.
- AMERICAN RAILROAD MASTER TINNERS', COPPERSMITHS' AND PIPEFITTERS' ASSOCIATION.—W. E. Jones, C. & N. W., 3814 Fulton St., Chicago. Convention for 1917 postponed.
- AMERICAN RAILWAY ASSOCIATION.—J. E. Fairbanks, general secretary, 75 Church St., New York.
- AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W., Chicago. Next annual meeting, October, 1918, New York.
- AMERICAN RAILWAY ENGINEERING ASSOCIATION.—E. H. Fritch, 900 S. Michigan Ave., Chicago. Next annual meeting, March 20-22, 1918, Chicago, Ill.
- AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION.—J. W. Taylor, 1112 Karpen Bldg., Chicago.
- AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—Owen D. Kinsey, Illinois Central, Chicago.
- AMERICAN SOCIETY FOR TESTING MATERIALS.—Prof. E. Marburg, University of Pennsylvania, Philadelphia, Pa.
- AMERICAN SOCIETY OF CIVIL ENGINEERS.—Chas. Warren Hunt, 220 W. 57th St., New York. Regular meetings, 1st and 3d Wednesday in month, except July and August, 220 W. 57th St., New York.
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York.
- AMERICAN WOOD PRESERVERS' ASSOCIATION.—F. J. Angier, Supt. Timber Preservation, B. & O. Mt. Royal Sta., Baltimore, Md. Next convention, January 22-24, 1918, Hotel Sherman, Chicago.
- ASSOCIATION OF AMERICAN RAILWAY ACCOUNTING OFFICERS.—E. R. Woodson, Room 1116-8 Woodward Bldg., Washington, D. C. Next annual meeting, St. Louis, May, 1918.
- ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS.—George W. Lyndon, 1214 McCormick Bldg., Chicago. Semi-annual meeting with Master Car Builders' Association.
- ASSOCIATION OF RAILWAY CLAIM AGENTS.—Willis H. Failing, Terminal Station, Central of New Jersey, Jersey City, N. J.
- ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., Room 411, C. & N. W. Sta., Chicago.
- ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS.—W. L. Connelly, Superintendent of Telegraph, Indiana Harbor Belt, Gibson, Ind.
- ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS.—G. P. Conard, 75 Church St., New York.
- BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—C. E. Ward, U. S. Wind & Pump Company, Batavia, Ill. Meetings with American Railway Bridge and Building Association.
- CANADIAN RAILWAY CLUB.—James Powell, Grand Trunk, P. O. Box 7, St. Lambert (near Montreal), Que. Regular meetings, 2d Tuesday in month, except June, July and August, Windsor Hotel, Montreal, Que.
- CANADIAN SOCIETY OF CIVIL ENGINEERS.—Clement H. McLeod, 176 Mansfield St., Montreal, Que. Regular meetings, 1st Thursday in October, November, December, February, March and April. Annual meeting, January, Montreal.
- CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 841 Lawlor Ave., Chicago. Regular meetings, 2d Monday in month, except June, July and August, Hotel La Salle, Chicago.
- CENTRAL RAILWAY CLUB.—H. D. Vought, 95 Liberty St., New York. Regular meetings, 2d Friday in January, May, September and November. Annual dinner, 2d Thursday in March, Hotel Statler, Buffalo, N. Y.
- CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.—W. R. McMunn, New York Central, Albany, N. Y.
- CINCINNATI RAILWAY CLUB.—H. Boutet, Chief Interchange Inspector, Cin. Rys., 101 Carew Bldg., Cincinnati. Regular meetings, 2d Tuesday, February, May, September and November, Hotel Sinton, Cincinnati.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.—Elmer K. Hiles, 568 Union Arcade Bldg., Pittsburgh, Pa. Regular meetings, 1st and 3d Tuesday, Pittsburgh, Pa.

FREIGHT CLAIM ASSOCIATION.—Warren P. Taylor, Traffic Manager, R. F. & P., Richmond Va.

GENERAL SUPERINTENDENTS' ASSOCIATION OF CHICAGO.—A. M. Hunter, 321 Grand Central Station, Chicago. Regular meetings, Wednesday, preceding 3d Thursday in month, Room 1856, Transportation Bldg., Chicago.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—A. L. Woodworth, C. H. & D., Lima, Ohio.

INTERNATIONAL RAILWAY FUEL ASSOCIATION.—J. G. Crawford, C. B. & Q. R. R., 702 E. 51st St., Chicago. Next convention, May, 1918, Chicago.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1126 W. Broadway, Winona, Minn.

INVESTMENT BANKERS' ASSOCIATION OF AMERICA.—Frederick R. Fenton, 11 W. Monroe St., Chicago.

MAINTENANCE OF WAY AND MASTER PAINTERS' ASSOCIATION OF THE UNITED STATES AND CANADA.—F. W. Hager, Fort Worth & Denver City, Fort worth, Tex. Next convention, October 15-17, 1918, Chicago.

MASTER BOILER MAKERS' ASSOCIATION.—Harry D. Vought, 95 Liberty St., New York.

MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION OF THE UNITED STATES AND CANADA.—A. P. Dane, B. & M., Reading, Mass.

MASTER CAR BUILDERS' ASSOCIATION.—J. W. Taylor, 1112 Karpen Bldg., Chicago. Next annual convention, June, 1918, Atlantic City, N. J.

NATIONAL ASSOCIATION OF RAILWAY COMMISSIONERS.—Jas. B. Walker, 120 Broadway, New York City.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, 149 Peoples Gas Bldg., Chicago. Annual exhibition, March 18-21, 1918, Coliseum and Annex, Chicago.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meeting, 2d Tuesday in month, except June, July, August and September, Boston.

NEW YORK RAILROAD CLUB.—Harry D. Vought, 95 Liberty St., New York. Regular meeting, 3d Friday in month, except June, July and August, 29 W. 39th St., New York.

NIAGARA FRONTIER CAR MEN'S ASSOCIATION.—Geo. A. J. Hochgrebe, 623 Brisbane Bldg., Buffalo, N. Y. Meetings, 3d Wednesday in month, Statler Hotel, Buffalo, N. Y.

PACIFIC RAILWAY CLUB.—W. S. Wollner, Assistant to Chief Engineer, Northwestern Pacific R. R., San Francisco, Cal.

PEORIA ASSOCIATION OF RAILROAD OFFICERS.—F. C. Stewart, 410 Masonic Temple Bldg., Peoria, Ill. Regular meetings, 3d Thursday in month, Jefferson Hotel, Peoria.

RAILWAY BUSINESS ASSOCIATION.—Frank W. Noxon, 30 Church St., New York.

RAILWAY CLUB OF PITTSBURGH.—J. B. Anderson, Room 207, P. R. R. Sta., Pittsburgh, Pa. Regular meetings, 4th Friday in month, except June, July and August, Pittsburgh Commercial Club Rooms, Colonial Annex Hotel, Pittsburgh.

RAILWAY DEVELOPMENT ASSOCIATION.—D. C. Welty, Commissioner of Agriculture, St. L., Iron Mt. & So., 1047 Railway Exchange Bldg., St. Louis. Next annual convention, May, 1918, Houston, Tex.

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—J. Scribner, 1063 Monadnock Block, Chicago. Meetings with Association of Rail-way Electrical Engineers.

RAILWAY FIRE PROTECTION ASSOCIATION.—C. B. Edwards, Office of the President's Assistant, Seaboard Air Line, Norfolk, Va.

RAILWAY REAL ESTATE ASSOCIATION.—R. H. Morrison, Assistant Engineer, C. & O., Richmond, Va.

RAILWAY SIGNAL ASSOCIATION.—C. C. Rosenberg, Myers Bldg., Bethlehem, Pa.

RAILWAY STOREKEEPERS' ASSOCIATION.—J. P. Murphy, N. Y. C. R. R., Box C, Collinwood, Ohio.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 2136 Oliver Bldg., Pittsburgh, Pa. Meetings with Master Car Builders' and Master Mechanics' Association.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, 50 Church St., New York. Meetings with Association of Rail-way Telegraph Superintendents.

RICHMOND RAILROAD CLUB.—F. O. Robinson, C. & O., Richmond, Va. Club has been suspended until after the war.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—P. J. McAndrews, C. & N. W., Sterling, Ill. Next annual convention, September 17-19, 1918, Auditorium Hotel, Chicago.

ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2d Friday in month, except June, July and August, St. Louis.

SALT LAKE TRANSPORTATION CLUB.—R. E. Rowland, David Keith Bldg., Salt Lake City, Utah. Regular meetings, 1st Saturday of each month, Salt Lake City.

SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, 3868 Park Ave., New York. Meetings with annual convention Railway Signal Association.

SOCIETY OF RAILWAY FINANCIAL OFFICERS.—L. W. Cox, N. & W., Philadelphia, Pa.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—E. W. Sandwich, A. & W. P. R. R., Atlanta, Ga.

SOUTHERN & SOUTHWESTERN RAILWAY CLUB.—A. J. Merrill, Grant Bldg., Atlanta, Ga. Regular meetings, 3d Thursday, January, March, May, July, September, November, 10 a. m., Piedmont Hotel, Atlanta.

TRACK SUPPLY ASSOCIATION.—W. C. Kidd, Ramapo Iron Works, Hillburn, N. Y. Meetings with Roadmasters' and Maintenance of Way Association.

TRAFFIC CLUB OF CHICAGO.—C. B. Signer, La Salle Hotel, Chicago.

TRAIN DESPATCHERS' ASSOCIATION OF AMERICA.—J. F. Mackie, 7122 Stewart Ave., Chicago. Next annual convention, June 18, 1918, Grand Rapids, Mich.

TRAFFIC CLUB OF PITTSBURGH.—D. L. Wells, Gen'l Ag't, Erie R. R., 1924 Oliver Bldg., Pittsburgh, Pa. Meetings bi-monthly, Pittsburgh.

TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, N. Y. C. R. R., Cleveland, Ohio.

UTAH SOCIETY OF ENGINEERS.—Frank W. Moore, 1111 Newhouse Bldg., Salt Lake City, Utah. Regular meetings, 3d Friday in month, except July and August, Salt Lake City.

WESTERN ASSOCIATION OF SHORT LINE RAILROADS.—Clarence M. Oddie, Mills Bldg., San Francisco.

WESTERN CANADA RAILWAY CLUB.—L. Kon, Immigration Agent, Grand Trunk Pacific, Winnipeg, Man. Regular meetings, 2d Monday, except June, July and August, Winnipeg.

WESTERN RAILWAY CLUB.—J. W. Taylor, 1112 Karpen Bldg., Chicago. Regular meetings, 3d Monday in month, except June, July and August, Hotel Sherman, Chicago.

WESTERN SOCIETY OF ENGINEERS.—Edgar S. Nethercut, Secretary, 1735 Monadnock Block, Chicago, Ill. Regular meeting, first Monday in month, except January, July and August. Extra meetings generally on other Monday evenings except in July and August.

## Traffic News

A total of 1,845,689 troops had been moved by the railroads up to December 2, according to reports received by the Railroads' War Board.

R. S. Lovett, director of priority in transportation, has denied a report that he is contemplating an order shutting off a supply of cars from the automobile industry.

In its first year of operation the Panama Limited, the Illinois Central's 23-hour train between Chicago and New Orleans, was 99 per cent on time. Out of 365 trips ending on November 14, 1917, the train was late only four times. Continuously, for a period of 3½ months it was on time.

Shortage of cars is said to have produced serious congestion in the rice belt of Texas, Louisiana and Arkansas, especially in the latter state. Shippers in Arkansas are said to have still in their warehouses 400 carloads of rice which has been sold, but which the railroads cannot take away.

The Great Lakes Transit Corporation and the Northwestern Steamship Company, acting on the request of the Food Administration, have agreed to operate their vessels until December 12 and longer if the weather conditions permit. A new vessel, just completed at a dock on the lakes, is to carry a cargo of flour direct from Duluth, by way of the St. Lawrence River, to New York City.

In Philadelphia, last week, at a conference of railroad men and merchants, called because of serious complaints of shortage of coal, it was said that that city would need 23,000 tons of coal a day for the next 40 days. The representative of the Pennsylvania Railroad said that 2,245 carloads of freight, some domestic and some for export, consigned to the government, had been unloaded on the ground in and near Philadelphia because of lack of vessels for water transportation.

The governor of Ohio, appealing last week to the Fuel Administration at Washington for transportation relief, reported that three-fourths of the state institutions in Ohio were out of coal; that the manufacturer of airplanes in Dayton had 100 cars of coal stalled on side tracks between West Virginia mines and Dayton; that carloads of coal were detained on nearly every railroad side track in the state, and that at Hobson, Meigs county, such cars had been standing since October 1. The governor further gave specific locations of about six thousand cars of coal said to be stalled on various railroads.

Gradual improvement in the transportation difficulties involving shipments of coal by rail to Detroit and other points in the northern middle west is reported by the United States Fuel Administration. This movement was halted by embargoes placed on western shipments at Cincinnati and other Ohio gateways. The Fuel Administration called the attention of the operating committee of the eastern railroads to this accumulation of coal and the embargo on all coal over the Cincinnati division of the Big Four was at once lifted. The embargo on shipments over the Cincinnati, Hamilton & Dayton was lifted on December 4.

R. S. Lovett, director of transportation priority, on November 29 amended and extended priority order No. 4, issued on November 22, to provide that until further order railroads in Texas, New Mexico, Louisiana, Oklahoma, Arkansas, Kansas and Missouri shall give preference and priority in transportation to all shipments of cottonseed cake, cottonseed meal, hay, rice, straw, hulls and forage for all points in Texas and New Mexico from Texas, Louisiana, Oklahoma, Arkansas, Kansas and Missouri over all other traffic, except livestock and perishables, human foodstuffs, railroad supplies and material, coal and shipments for the government.

According to the reports of the Geological Survey, a slight decrease marked the production of bituminous coal during the week ended November 24. The total production is estimated at 11,260,490 net tons. This was .6 per cent less than the output during the preceding week, but the production for the month remains higher than at any time since early July. Anthracite

shipments amounted to 42,936 cars, the largest mark attained since the week of September 1. During the week ended November 17 representative operators produced 75.5 per cent of their combined full time capacity as limited by the labor forces at present available. Of the 24.5 per cent of what may be termed potential production which they failed to realize, 19.2 per cent was reported as lost for lack of cars. Inadequate transportation, the report says, thus remains the great limiting factor in the bituminous industry.

#### Food Administration Orders Preferential Movement of All Grain

Through the efforts of the Chicago Car Service Committee of the Railroads' War Board, the Chicago Board of Trade and other organizations, the federal food administration has modified its order requiring preferential movement of wheat, so as to include all grains. A large share of this year's corn crop contains an unusual amount of moisture and is in danger of spoiling unless promptly shipped to the large elevators having facilities for drying the corn. So long as the "priority order" gave preference to wheat shipments, the transportation of corn was necessarily delayed, and an immense amount of corn was in danger of spoiling. In anticipation of a very heavy movement of corn the Chicago Car Service Committee has now appealed to the War Board to order box cars sent West.

#### Consolidation of European Government Export Functions

France, Italy, England and Russia have established an office at 165 Broadway, New York, to centralize their requests for modification of embargo permits. It is called the "Traffic Executive." This step has been taken, at the request of the railroads' war board, to relieve the railroad embargo offices from the needless congestion resulting from thousands of requests for modification permits, the majority of which are duplications. When permits are desired for traffic consigned to Comptroller Johannet for account of the French government, General Tozzi for account of the Italian government, Connop Guthrie for account of the British government or C. G. Medzikhovsky for account of the Russian government, the application will now be made direct to the "Traffic Executive," who in turn will make application to the railroad company. It is expected that this centralization of authority will tend to relieve the over-burdened railroad and commercial telegraph lines.

#### Thanksgiving Traffic at Camp Devens

At Camp Devens, Ayer, Mass., for the Thanksgiving vacation, about 20,000 soldiers were granted leave of absence, and the Boston & Maine ran 18 special trains for their accommodation. The furloughs extended from 6 o'clock Wednesday evening until 6 o'clock Friday morning, but in view of the probable scarcity of passenger cars for some of the Thanksgiving traffic, the military authorities consented to let some of the men off earlier; and the special trains from the camp started at different hours from 11 a. m. to 6 p. m. The total number of passengers carried by the road from Ayer station and from the camp for the holiday was 18,117; and of these 14,774 were taken on the special trains within the hours named. Trains were run to Boston; to Troy, N. Y.; Concord, N. H.; Pittsfield, Mass.; Portland, Me.; Providence, R. I.; New Bedford, Mass.; Stamford, Conn., and Bellows Falls, Vt.

Counting now only the mileage on Boston & Maine rails, nine specials were run to Boston, 36 miles; four to Worcester, 28 miles; one to Concord, N. H., 57 miles; one to Salem, Mass., 40 miles; one to Portland, Me., 116 miles; one to Concord Junction, 14 miles, and one to Troy, N. Y., 154 miles. Practically all of the cars for use in these trains had to be run to Ayer from Boston, so that for the engines and for the men it meant 72 miles added to each run. For points on the New Haven and the Boston & Albany the cars were run through—some of them as far as Stamford, Conn. For the longest trip, that to Troy, N. Y., the special left Ayer at 12:45 p. m., arriving at Troy at 5:45 p. m.

The special trains started on their return trips Thursday evening; from Boston between 5:55 p. m. and 3:20 a. m. (Friday); from Concord, N. H., Thursday at 9 p. m.; from Pittsfield, Mass., at 7; Portland, Me., at 8:15; Providence, R. I., at 10:50; Stamford, Conn., at 7:40; Troy, N. Y., at 10 o'clock. The trains from the more distant points were scheduled to arrive at Ayer between 11 p. m. and 3 a. m.

Of all the passengers leaving the camp about 9,000 were carried to Boston, whence a large percentage made use of regular trains to points on other divisions of the Boston & Maine. The entire movement was made without serious delay and without accident.

#### Railroads Urged to Move Fertilizers Promptly

"Fertilizer isn't usually recognized as a factor in war, but it may prove an important one, nevertheless," says R. H. Aishton, chairman of the Central Department of the Railroads' War Board. "Our own fighting men and those of our allies are looking to this country for food supplies, and so is the civilian population of this and our allied countries. We must produce more food than ever; must plant a larger acreage and should aim to increase the average yield per acre. This means the use of more fertilizer; and notice has been sent to every railroad to provide for the prompt transportation of fertilizer and for the ingredients of manufactured fertilizer, such as phosphate rock, ground limestone, potash, gypsum, certain acids and other commodities. Notice has also been sent to all railroads that, on account of the shortage of leather, where animals are killed on railroads the hides should be saved. Some roads have made a practice of doing this but others have not."

#### Curtailment of Passenger Service

The Broadway Limited, the twenty-hour passenger train between New York and Chicago over the Pennsylvania, has been discontinued; this at the request of the Pittsburgh operating committee of the eastern roads, to facilitate the better movement of freight traffic.

The New York Central and the Pennsylvania have discontinued the observation cars on all New York-Chicago limited expresses. The same is true of the Empire State express of the New York Central and the "St. Louisian" of the Pennsylvania.

The Pennsylvania announces that on all trains between New York and Philadelphia, which have a Pullman smoking car (hitherto run for the accommodation of passengers holding seats in parlor cars) seats in such cars will henceforth be charged for; that is to say, the passenger paying for a single seat must elect whether he will ride in the parlor car or in the smoking car.

#### Heavy Passenger Traffic on the Pennsylvania

Except as limitations may be placed on the traffic as a war measure the Pennsylvania does not contemplate any general reductions in passenger service, said President Rea in a statement issued just before the General Operating Committee for the eastern roads ordered the discontinuance of the Broadway Limited.

"Less passenger train service on the eastern railroads, and especially on the Pennsylvania system, would be very desirable," he said, but "the Pennsylvania has about the largest passenger traffic of any railroad in the country. The year 1916 was the heaviest in its history, and passenger revenue for the first nine months of 1917 has increased 18 per cent over 1916, while later returns show that it is increasing at the rate of 30 per cent over 1916."

"Any traveler on this system can see for himself on day and night trains the extraordinary increase in passenger travel, including the heavy family travel to and from camps and to and from Washington on government business. I doubt whether slower and longer trains carrying full loads would materially relieve the tracks and terminals. Therefore, at this time I can see no other course than to continue meeting the abnormal demand for passenger transportation to the best of our ability."

The Philadelphia, Baltimore & Washington, the main line of the Pennsylvania System between Philadelphia and Washington, 137 miles, now earns about one-fifth of the entire passenger earnings of the whole Pennsylvania system. For the month of October its passenger revenues amounted to \$1,384,001; while the total passenger receipts on the whole system for that month were \$5,991,240. For the ten months ending with October, passenger receipts were on the P. B. & W. \$11,038,944, and on the whole Pennsylvania system, 12,000 miles, \$55,031,756. Twelve or fifteen extra sleeping cars are used on the trains from New York to Washington almost every night; and, altogether, the sleeping car service between these two cities requires about 150 cars, not counting those which start from Philadelphia.

## Commission and Court News

### INTERSTATE COMMERCE COMMISSION

The Interstate Commerce Commission has suspended until April 4 tariffs containing proposed increases in rail and lake class and commodity rates.

#### Procedure Under Fifteenth Section

The Interstate Commerce Commission on December 4 issued a notice to all carriers saying that since the fifteenth section amendment became effective carriers have in some instances filed tariffs containing rates issued in compliance with an order of the commission and also including increased rates or charges not authorized by and having no connection with the commission's order. If such a tariff were accepted by the commission the terms of the amended fifteenth section would not have been complied with. If the tariff were rejected by the commission the order of the commission would not have been complied with.

Aside from the question of orderly procedure important questions of law are involved when a carrier tenders for filing such a schedule, the commission says. It may therefore be doubted if an increased rate or charge filed without approval of the commission would be "in effect." If it would not, the old rate would still be in effect and any departure therefrom would be a violation of section 6 and subject the offender to the penalty fixed therein for violation thereof.

The notice also says that if an increased rate or charge filed without approval of the commission does not lawfully change the previously existing rate or charge, willful failure on part of the carrier to observe the previously existing rate or charge "until changed according to law" would be a violation of the Elkins Act. It is important that the provisions of the amended fifteenth section be strictly observed and complied with, and the commission hopes that neither further admonition nor resort to more drastic action will be necessary in any instance.

#### Suspension Docket Almost Discontinued

The amendment of the fifteenth section of the commerce law, requiring carriers to secure approval in advance from the Interstate Commerce Commission before they can file a tariff containing an increased rate, appears likely to result in a practical abolition of the suspension docket because proceedings involving increased rates are being settled before, instead of after the filing of tariffs. Since the amendment became effective carriers had filed up to December 1 a total of 2,005 applications for permission to file tariffs containing an increased charge, a very large proportion of them being of a minor character, such as changes to correct errors. The commission had issued orders approving or rejecting the applications bearing numbers up to 146, although, as they are not strictly consecutive, the number of orders that has actually appeared is somewhat less, probably in the neighborhood of 125. Many of these orders, however, covered a large number of applications and many of the applications were made a part of the supplemental advanced rate case. A suspension order was issued on December 4, but before that the last suspension order issued was on November 14, and the latest before that were on October 27 and October 9, whereas formerly there used to be an average of nearly one a day.

### STATE COMMISSIONS

The New York State Public Service Commission, first district, has authorized the Long Island Railroad to advance from 2 cents a mile to 2.25 cents a mile its price for mileage tickets; and has disapproved applications for a number of increases in the rates on single trip tickets. The commission declares that the railroad has not shown in sufficient detail the reasonableness of the proposed advances. Commissioner Hervey, who wrote the opinion, says that there will be an increase in revenues in the near future, which the company had underestimated, and that the increase in cost of service may not be so great as is claimed.

### PERSONNEL OF COMMISSIONS

Fred W. Putnam, whose appointment as a member of the Minnesota Railroad & Warehouse Commission was announced in the *Railway Age Gazette* of November 16, was born at Red Wing, Minn., on November 15, 1883. He graduated from the University of Minnesota and completed a course in law at the University of Michigan.

Following his graduation from the latter school he returned to Minnesota to enter the office of the state attorney-general. He was later associated with the law firm of Keith, Evans, Thompson & Fairchild, and at the time of his appointment was a member of the law firm of Green & Putnam, of Red Wing, Minn. He was appointed a member of the commission to succeed Charles E. Elmquist, who resigned after a service of nine years to become a solicitor of the valuation committee of the National Association of Railway and Utility Commissioners with headquarters at Washington, D. C.

Charles Webster, whose appointment as a member of the Iowa State Board of Railroad Commissioners was announced in the *Railway Age Gazette* of November 16, was born at Waucoma, Ia., on May 18, 1859. He was first employed as a station agent and telegraph operator at Waucoma, and then engaged in farming and stock-raising. He was for a number of years interested in the construction and financing of telephone companies and also in public utilities in Arizona. At the present time he is president of four chains of lumber yards operating in Iowa, North Dakota, South Dakota and Montana, and is a member of the firm of Webster Brothers, dealing in lumber, grain and a wholesale egg business in Waucoma.



F. W. Putnam

He is also president of the Northwestern Lumbermen's Association, with headquarters at Minneapolis, which has members in the states of Iowa, North Dakota, South Dakota and Minnesota. Mr. Webster is a member of the State Council of Defense of Iowa and was appointed federal fuel administrator before assuming the position of railroad commissioner. He will continue to discharge his duties as fuel administrator as well as those of railroad commissioner.

### COURT NEWS

#### Derailment by Sand on Crossing

A locomotive became derailed at a highway crossing by striking a pile of sand and gravel, and the fireman was injured. In an action against the railroad the evidence failed to show how the sand and gravel came to be there any length of time before the accident. The Minnesota Court held that the rule of *res ipsa loquitur* had no application, as the crossing was not in the exclusive possession or control of the railroad. The evidence did not justify an inference of negligence on the part of the railroad.

—McGillivray v. Great Northern (Minn.), 164 N. W., 922. Decided June 30, 1917.

#### Contributory Negligence of Pedestrian at Crossing

In an action for personal injury from falling on ice accumulating on a sidewalk at a grade crossing, it appeared that the ice was the only ice in the locality and could be seen for over six feet. Plaintiff could have seen it had she looked, but she failed to do so. The Pennsylvania Supreme Court held that a nonsuit was properly entered on the ground of her contributory negligence. One walking along a traveled highway must observe where and how he is going so as to avoid dangers which ordinary prudence would disclose.—Kleckner v. New Jersey Central (Pa.), 102 Atl., 141. Decided June 30, 1917.

#### Tort of Intoxicated Railroad Employee

The Vermont statute, P. S. 4506, makes railroads liable for damages which are sustained by reason of an operator, etc., who uses intoxicating liquors as a beverage to the knowledge of any of the officers of the road. The Vermont Supreme Court, in an action for damages due to the defendant railroad's agent shooting the plaintiff holds that as the evidence failed to show that either the defendant's president, superintendent, or one of its directors knew that the agent used intoxicating liquors as a beverage, a verdict was properly directed for the defendant.—Staten v. Central Vermont (Vt.), 102 Atl., 97. Decided October 2, 1917.

#### "Transportation" of Interstate Shipments of Live Stock

The Texas Court of Civil Appeals holds that, in view of section 1 of the Interstate Commerce Act, defining "transportation" to include services in connection with the receipt and delivery of the shipment, etc., the duty to deliver an interstate shipment of live stock to the commission company to which it was consigned was nondelegable, and where delivery could not be made in the pens of the consignee the duty of transportation was not fulfilled by delivery at the chutes of the stockyard company, which placed them in inaccessible pens having no facilities for feed or water.—Panhandle & Santa Fé v. Phillips (Tex.), 197 S. W., 1031. Decided October 17, 1917.

#### Directors' Power as to Receiverships

The federal district court in Massachusetts holds that the board of directors of a railroad, with the approval of the majority of the stockholders, has power to initiate proceedings looking to a receivership, by procuring the filing of a bill by a bona fide creditor, the allegations of which are admitted for the company, and there is no impropriety in such proceeding, where the directors act in good faith, solely for the interests of the company, and in view of its duty to the public as a common carrier. The court, however, is not absolutely bound to appoint a receiver. It might refuse to do so if confident that there was no real necessity for such action and that the application was improvidently made. The facts in the present instance indicated that this was not such a case.—Intercontinental Rubber Co. v. Boston & Maine, 245 Fed., 122. Decided February 26, 1917.

#### Limitation of Two Years for Action Under Federal Liability Act

The federal employers' liability act prescribes a limitation of two years from the time the cause of action arises for bringing action. In an action by an employee brought a few months after the injury the complaint stated a cause of action under the common law and statutes of the state of New York, and stated no fact bringing the action under the federal statute. After two trials had been had, and the case had been carried to the appellate courts by several appeals, and remanded for a new trial, the plaintiff moved for permission to amend his complaint, setting up the claim that at the time of the accident the plaintiff was engaged in interstate commerce and therefore entitled to the benefit of the federal act. This was not done until eight years after the happening of the accident. The New York Supreme Court, Special Term, Erie County, holds that the limitation of two years prescribed by the federal act applied, and a new trial would not be allowed on the amended complaint, as it would state a new cause of action under the federal act.—Kinney v. New York Central, 166 N. Y. Supp., 868. Decided July 1, 1917.

## Equipment and Supplies

#### FREIGHT CARS

THE MOTOR FUEL COMPANY, Sapulpa, Okla., is inquiring for 10 8,000-gal. capacity tank cars.

THE LOUISVILLE & NASHVILLE is inquiring for 300 steel underframes for 50-ton gondola cars.

THE UNITED STATES NAVY has ordered 10 40-ton gondola cars from the American Car & Foundry Company.

THE JOHNSON OIL REFINING COMPANY, Chicago, is in the market for 10 to 50 8,000 to 10,000-gal. capacity tank cars.

THE PENNSYLVANIA EQUIPMENT COMPANY, 1420 Chestnut street, Philadelphia, is in the market for 100 8,000-gal. capacity tank cars for lease.

THE ROMA WINE COMPANY, San Francisco, Cal., has purchased 4 10,000-gal. capacity tank cars from the Pennsylvania Tank Car Company.

THE GENERAL PETROLEUM COMPANY, Los Angeles, Cal., has purchased 4 10,000-gal. capacity tank cars from the Pennsylvania Tank Car Company.

THE POWER GASOLINE COMPANY, Bradford, Pa., has ordered one 8,000-gal. capacity all steel tank car from the Pennsylvania Tank Car Company.

THE UNION PACIFIC order for freight cars as given in last week's issue was incorrect. The company's 3,550 cars were distributed as follows: 1,000 stock cars, American Car & Foundry Company; 1,000 hopper bottom coal cars, Pullman Company; 50 caboose cars, Mount Vernon Car Manufacturing Company; 500 flat cars, Bettendorf Company, and 1,000 drop bottom gondola cars, Cambria Steel Company.

#### SIGNALING

THE WABASH has ordered from the General Railway Signal Company material for an interlocking plant of 35 levers at Iles, Ill.

THE PENNSYLVANIA has ordered from the General Railway Signal Company a Saxby & Farmer interlocking, 12 levers, for Lalor street, Trenton, N. J.

THE UNION PACIFIC is to install a mechanical interlocking plant at Republican River Bridge; Saxby & Farmer machine, six levers. The material has been ordered from the General Railway Signal Company.

THE MISSOURI, KANSAS & TEXAS has ordered from the Union Switch & Signal Company, to be installed by the railroad forces, a mechanical interlocking for the crossing of the St. Louis-San Francisco at Clinton, Mo.

THE ATCHISON, TOPEKA & SANTA FE has ordered from the Union Switch & Signal Company, to be installed by the railroad forces, a twenty-lever mechanical interlocking for Morris, Kan. The levers will have a. c. electric locks.

THE LOUISVILLE & NASHVILLE has ordered from the General Railway Signal Company, to be installed by the railroad company's forces, the material for automatic block signals on its line (single track) from Jackson, Ky., to Oakdale, Ky., 9 miles.

THE GREAT NORTHERN proposes next Spring to erect automatic block signals on its line (single track) from Blackfoot, Mont., to Summit, 34 miles; from Essex, Mont., to Columbia Falls, 42 miles and from Troy, Mont., to Bonner's Ferry, 31 miles, a total of 107 miles. The signals and material for this installation were ordered from the General Railway Signal Company, as noted in the *Railway Age Gazette* of November 2, page 821. The signals are one-arm, upper quadrant, 10-volt direct-current, with the mechanism at the top of the mast. This installation will require about 700 relays, 1,500 lightning arresters, and other materials in proportion.

## Supply Trade News

Lewis A. Larsen, assistant comptroller of the American Locomotive Company, has resigned to accept the position of assistant to the president of the Lima Locomotive Works, Inc., effective December 1, 1917, with headquarters at Lima, Ohio. Mr. Larsen was born at Ridgeway, Ia., in 1875. He received his early education in the public schools of Ridgeway and Decorah, Ia., and Upper Iowa University, Northwestern University and St. Paul College of Law. In November, 1897, he entered the service of the Chicago Great Western as clerk to the master mechanic. He held successively the positions of chief clerk to the superintendent of motive power and chief clerk to the assistant general manager. In 1904 he



L. A. Larsen

resigned to accept the position of chief clerk to the superintendent of motive power of the Northern Pacific at St. Paul. In November, 1906, he became associated with W. H. S. Wright, railway supplies, representing the Railway Steel Spring Company, the Pittsburgh Forge & Iron Company and other companies, and in 1907 entered the service of the American Locomotive Company. In 1909 he was appointed assistant to the vice president in charge of manufacturing, and July, 1917, was appointed assistant comptroller. For several years past Mr. Larsen has been a special lecturer in the Alexander Hamilton Institute, New York. He has also contributed a number of papers to the railroad magazines.

### A Locomotive an Hour

Production records at the Baldwin Locomotive Works are being broken weekly. It is reported that in a recent week about 100 locomotives of various sizes were turned out, and President Alba B. Johnson is authority for the statement that the plant is completing a locomotive an hour.

President Johnson at the recent directors' meeting also said:

"During 1916, 1,960 locomotives were made, an average of 160 a month. Large contracts for machining shells were executed and a considerable portion of the force, which ranged from 12,000 to 18,500 men, was diverted to shell manufacturing. All of these contracts except one, for the French Government, were run out during the spring of 1916. The French contract was completed in November. In 1917 the working force was increased approximately to 20,000 men. Locomotive production was largely increased and for ten months ending October 31, 1917, 2,254 were shipped, at the rate of 225 a month. This increase of production will be continued during November, December and the months of 1918.

"While our earnings have been satisfactory, the increase in production and increased cost of materials and labor have demanded a large increase in the amount of working capital as the conditions have been unfavorable for any financing. There has been no alternative but to provide the increased working capital by borrowing.

"Continued increasing activity is likely to require a continuation of all the capital at present employed. The directors have wisely decided that it is inexpedient to increase the loans in order to provide means for dividends on the common stock. At no time in the history of the works has there been so large an amount of business upon the books. All shell business has been transferred to the Eddystone Munitions Company. The work under contract should prove profitable and gives promise of satisfactory earnings during the succeeding year."

### Economies Devices Corporation and Franklin Railway Supply Company Merged

With a view to concentrating into one organization two groups of men who have been working along parallel lines in the development of increased efficiency of the steam locomotive, the Economies Devices Corporation and the Franklin Railway Supply Company have been merged into a new corporation, namely, the Franklin Railway Supply Company, Inc.

The officers of the new company will be as follows: J. S. Coffin, chairman of the board of directors; S. G. Allen, vice-chairman; H. F. Ball, president; Walter H. Coyle, senior vice-president; J. L. Randolph, vice-president in charge of western territory; C. W. Floyd Coffin, vice-president in charge of Eastern and Southern territory; C. L. Winey, secretary and treasurer; Harry M. Evans, Eastern sales manager; C. J. Burkholder, Western sales manager; Hal R. Stafford, chief engineer, and William T. Lane, mechanical engineer.



J. S. Coffin

varied knowledge gained from 14 years of railroad work and 26 years in the railroad supply field. He began as a machinist's apprentice and became fireman, engineer and road foreman of engines. Most of this experience was on the Wisconsin Central. He left the railroad to enter the mechanical department of the Galena Signal Oil Company as mechanical expert, was promoted to manager of that department and several years later was elected vice-president. After serving as vice-president for two years, he resigned to accept the vice-presidency of the American Brake Shoe & Foundry Company, which position he held until 1911. In 1902 he organized the Franklin Railway Supply Company, of which he was president up to 1916, when he was elected chairman of the board. In addition to being chairman of the board of directors of the Franklin Railway Supply Company, Inc., Mr. Coffin is a director in a large number of other corporations.

Samuel G. Allen, vice-chairman of the Franklin Railway Supply Company, Inc., is both a lawyer and a business man. He was plunged into business responsibilities immediately after leaving college, and studied law in his spare time. He was admitted to the bar in Warren County, Pa., and practiced for nine years in the oil districts of Pennsylvania. When the



S. G. Allen

Franklin Railway Supply Company was formed in 1902, Mr. Allen was elected secretary and treasurer, and later became vice-president, and in 1916 was elected president. H. F. Ball, president of the Franklin Railway Supply Company, Inc., has spent his entire business life in intimate contact with locomotive operation and construction. After serving his time in the locomotive and car departments of the Pennsylvania Railroad at Altoona, he entered the drafting room, and two years later entered the service of the Lake Shore & Michigan Southern as chief draftsman. He held successively the posi-

tions of general foreman car shops, general car inspector, mechanical engineer and superintendent of motive power. He resigned from the Lake Shore to become vice-president in charge of engineering of the American Locomotive Company, which position he occupied until 1913, when he left the company to become president of the Economy Devices Corporation.

Walter H. Coyle, senior vice-president of the Franklin Railway Supply Company, Inc., brings to his new position experience gained by many years in both railroad work and the railroad supply field. Mr. Coyle was for 11 years in the service of the Erie Railroad in the mechanical and traffic departments. Upon leaving the railroad he became identified with the Kent Manufacturing Company, and later entered the mechanical department of the Franklin Railway Supply Company. He spent six years in this department, when he was called to New York as assistant to the vice-president and placed in charge of the sales department of the central territory. He was elected second vice-president shortly after, and then vice-president, which position he held up to his election as senior vice-president of the new organization.

J. L. Randolph, vice-president of the Franklin Railway Supply Company, Inc., takes charge of the western territory, with office in Chicago. Mr. Randolph began as a machinist apprentice in the Concord, N. H., shops of the Northern Railroad, now a part of the Boston & Maine. Subsequently he served this road in the capacity of machinist, gang foreman, general foreman, master mechanic and superintendent of shops. He left the railroad to accept a position in the mechanical department of the Franklin Railway Supply Company. Three years later he was appointed sales manager of the Economy Devices Corporation, and in 1916 was elected vice-president.

C. W. Floyd Coffin, vice-president of the Franklin Railway Supply Company, Inc., takes charge of the eastern-southern territory, with office in New York. Mr. Coffin's entire business experience has been in the railroad supply field. After leaving Cornell University he spent five years in the treasury, sales and service departments of the Franklin Railway Supply Company. He was then transferred to Chicago as assistant western sales manager, and

later promoted to western sales manager, which position he held up to the time of his appointment as vice-president of the Franklin Railway Supply Company, Inc.

C. L. Winey, secretary and treasurer of the Franklin Railway Supply Company, Inc., is a man of extended experience both in railroad work and in the railroad supply field. Starting his career on the Pennsylvania Railroad, he spent three years in the motive power department, one year in the maintenance of way and signal department, and two years in the transportation department. He left railroad work to enter the service of the Galena Signal Oil Company, and five years later accepted the position of secretary and works manager of the Kent Manufacturing Company. In 1908 he was elected secretary and treasurer of the Franklin Railway Supply Company, which position he held until he was elected secretary and treasurer of the Franklin Railway Supply Co., Inc.

Harry M. Evans has been appointed eastern sales manager of the Franklin Railway Supply Company, Inc., with office in New York. Mr. Evans began railroad work as a call boy on the Erie, and served in various positions in the mechanical, transportation and traffic departments of that road. Upon leaving the Erie he entered the mechanical department of the Franklin Railway Supply Company, as traveling representative. He was promoted to assistant western sales manager, and shortly after was made eastern sales manager, which position he held at the time of his recent appointment as eastern sales manager of the Franklin Railway Supply Company, Inc.

C. J. Burkholder has been appointed western sales manager of the Franklin Railway Supply Company, Inc., with office in Chicago. Up to 1916 Mr. Burkholder's business experience had been entirely in railroad work. He was employed in the roundhouse of the Pennsylvania Railroad at Tyrone, Pa.; and later was a locomotive fireman. Leaving the Pennsylvania R. R., he became a locomotive engineer on the Union Pacific, and later on the Kansas City Southern. He was in turn promoted to traveling engineer, trainmaster, general road foreman of engines and division superintendent. In 1916 he accepted a position with the Economy Devices Corporation as mechanical representative in the western territory, which position he occupied up to his present appointment.

Hal R. Stafford, chief engineer of the Franklin Railway Supply Company, Inc., has for the past 17 years been active in locomotive development. On leaving college he started as a special machinist with the Schenectady Locomotive Works, shortly afterward was transferred to the drawing room. A year later he took charge of the cylinder and valve division. Eight years later he was made assistant to the consulting engineer in charge of Compound Locomotives. While in this position he helped develop the first Mallet locomotive, the Cole balanced compound and the Cole-Stafford balanced simple locomotive. For some years he represented the American Locomotive Company, conducting road tests jointly with various railroads. When the



H. F. Ball



C. W. F. Coffin



W. H. Coyle



J. L. Randolph



C. L. Winey

Economy Devices Corporation was formed he was appointed mechanical engineer of that company.

William T. Lane, mechanical engineer of the Franklin Railway Supply Company, Inc., has spent his entire business career in the railway supply field. For the past six years he has been constantly in touch with locomotive development. On leaving college he went as an apprentice with the Franklin Portable Crane & Hoist Company. His next position was as draftsman for the Franklin Railway Supply Company, then Chief Draftsman. In 1915 he was made mechanical engineer.

Axil A. Storm, vice-president of the Pettibone, Mulliken Company, and president of the U. S. Ball Bearing Co., Chicago, died in New York November 29.

L. B. Moses, since 1911 sales manager of the Kettle River Company, Minneapolis, Minn., has been elected second vice-president of the Walter A. Zelnicker Supply Company, and will be in charge of the rail department of the company at its main offices in St. Louis, Mo.

### TRADE PUBLICATIONS

**OXY-PINTSCH METAL CUTTING.**—An attractive eight-page booklet has been issued by the Pintsch Compressing Company, 2 Rector street, New York, describing the model "C" Oxy-Pintsch cutting equipment furnished by this company. This booklet sets forth the advantages of Pintsch gas for metal cutting and contains a brief description with illustrations of the various parts of its complete outfit. This includes an oxygen pressure regulator, high and low pressure Pintsch gas regulators, the use of which depends upon whether the gas is drawn from flasks or from low pressure service pipe lines, and the cutting torch.

**DOWN AND BACK—A RAILROAD STORY.**—A book of 52 pages, 5½ in. by 8 in. in size with 7 illustrations. In this book, issued by the Pneumatic Scale Corporation, Ltd., Norfolk Downs, Mass., in the interest of its pilferproof collapsible steel container, Sam tells of his and Bob's departure into the express business, very successful at first, of their unsuccessful experience with weak containers and of their deep seated desire for a stronger package as exemplified in the container made by the Pneumatic Scale Corporation. Bob and Sam, in the interesting story that Sam tells, entered upon the express business because they realized the waste of having to go to town for Old Man Sanborn's general store, that is going with an empty wagon and returning with Sanborn's supplies, while the nail-mill truck went with a load of nails into town and came back empty. Then, as time went on they had to figure out classifications for charges and finally got up against a rule prohibiting the return of empty containers free of charge and against the weaker containers that as a result were made so weak that they barely lasted out the trip, let alone a return. It got so, says Sam that "It don't take much of a sneeze to make the average shippin' case collapse, anyway." Previous to that almost the only trouble they had had was with oil. As the new grocer said the day they delivered him a couple of barrels of sugar, "He didn't object to the sugar tastin' of oil, it kind of gave it a new flavor, but he did object to findin' that the barrel of oil we brought had soaked up so much sugar." The story is interspersed with many other such touches and its author finds opportunity to bring up many of the other difficulties resulting from frail containers, theft, loss and damage, difficulty of loading cars to capacity with goods in frail containers, etc. References from articles in some of the technical magazines, from court cases and decisions, etc., inserted in the pages show Sam's bases in serious fact. On the whole, the book is well gotten up and takes an honorable position among trade publications of this character.

**ITALY NEEDS 800,000 TONS OF COAL** to run its railroads, munition factories and war industries. Italy's coal supply is so short that during the past summer more than one thousand square miles of forests were cut for use as firewood and in the preparation of charcoal. More than 500,000 tons of lignite was mined, both wood and lignite being used at present industrially, also on slow trains and switch locomotives. It is impossible to use such material for passenger trains, which have been under great pressure for months due to military movements.

### Railway Construction

**FRANKFORT & SHELBYVILLE ELECTRIC.**—Surveys are now being made to build an electric line from Frankfort, Ky., west to Shelbyville, 19.7 miles. The headquarters of the company are at Louisville Trust building, Louisville, Ky.

**HOUSTON, RICHMOND & SAN ANTONIO INTERURBAN.**—This company was organized to build from Houston, Texas, west to San Antonio, 186 miles, surveys have been made from San Antonio east via Gonzales for 100 miles and from Houston west to Brazos river, 30 miles, and grading work has been completed on 30 miles. E. Kennedy, president, Houston.

**KETTLE VALLEY.**—This company will build a line from Princeton, B. C., south along the Similkameen river to Copper mountain, about 14 miles. The line will serve copper mines owned by the Canada Copper Corporation. Contracts for grading and bridge work will be let the early part of this month. The work involves about 50,000 cu. yd. of grading per mile, of which 40 per cent will be solid rock; it will have a maximum grade of 2.2 per cent and maximum curvature of 14 deg. One bridge will be built over the Similkameen river, a number of trestles will be constructed, and four tunnels will be bored totaling in length about 1,200 ft. The construction of the bridges and trestles will involve the use of 2,000,000 ft. b. m., of timber. A. McCulloch, chief engineer, Penticton, B. C.

**LEHIGH VALLEY.**—The Lehigh Valley, the Pennsylvania and City of Newark, N. J., are jointly building a steel and timber temporary bridge over the Lehigh Valley and Pennsylvania tracks at Bay avenue, Newark, to eliminate a grade crossing. The Lehigh Valley carried out part of the work with company forces and Henry Steers has the contract for the Pennsylvania's share of the work. The total cost of about \$75,000 is to be paid jointly by the railroads and the City of Newark.

**NASHVILLE, CHATTANOOGA & ST. LOUIS.**—This company is building with its own forces the extension from Coalmont, Tenn., to new mines of the Tennessee Consolidated Coal Company at the head of Mill creek. The grading is about 80 per cent completed and six miles of track has been laid. The work involves handling about 28,000 cu. yd. to the mile 80 per cent of which is rock work. There will be two stations on the line which is being built to carry coal. (January 19, p. 124.)

**INCREASED PASSENGER RATES ON MEXICAN RAILWAY.**—The Secretary of Communications and Public Works has authorized the manager of the Mexican Railway, in compliance with the petition made by the company, to put into effect, beginning on November 1, 1917, the 25 per cent increase in the passenger rates. The proceeds of this increase, as in the case of the one granted to the Mexican Electric Tramway Company, is destined for the benefit of the Federal Treasury.—*Commerce Report*.

**FRENCH PLANS PROGRESSING TO MAKE PARIS A SEAPORT.**—Consul General Thackara at Paris reports: Periodical agitation has arisen since the seventeenth century in favor of uniting Paris with the sea in a way so as to render the connecting river or canal navigable to ships of large size. Since the flood of 1910 the problem has acquired a fresh interest. But the outbreak of the present war has caused the scheme to present itself to municipal and national authorities as one of capital importance, inasmuch as the inadequate port facilities and means of communication have militated strongly against the revictualing of the Paris region on reasonably favorable terms. On December 30, 1916, the city council invited the prefect of the Seine to prepare "a technical, administrative, and financial prospectus for the realization of the port of Paris," at the same time requesting the Provincial Government to "constitute a committee with the object of studying the organization and the financial régime to be applied to the port of Paris." The prefect of the Seine on March 23, 1917, reported progress along these lines. Preliminary studies were made by government commissions appointed on February 9, 1910, and January 14, 1911, respectively. On the basis of these the investigation is continuing.

## Railway Financial News

**CANADIAN PACIFIC.**—Preliminary returns of gross earnings for November show that a new high record for any month in the company's history has been established. The weekly statements for November give a gross of \$14,942,000, and it is probable, when the usual adjustments are carried, the monthly statement will top \$15,000,000 by a good margin. The previous high record for a month was \$14,733,774.

**CHICAGO & ALTON.**—See Missouri Pacific.

**MICHIGAN CENTRAL.**—The Illinois Public Utilities Commission has summoned the Michigan Central management to appear before it, December 11, in Chicago, to show cause why it issued \$4,000,000 notes and other securities without the commission's authority.

**MISSOURI PACIFIC.**—Negotiations are under way between the managements of the Chicago & Alton and Missouri Pacific for the rental of ninety miles of track of the latter road by the former. The stretch of track desired is that between Kansas City, Mo., and Norton.

**NEW YORK & PENNSYLVANIA.**—This road, which operates between Canisteo, N. Y., and Ceres, 56 miles, has been sold to Gustave Benjamin, of the Benjamin Iron & Steel Company, Buffalo, N. Y., for a price in the neighborhood of \$350,000. The road will be junked unless people who live along the line raise sufficient money to buy it from the new owner.

**OCKLAWAKA VALLEY.**—The Florida Railroad Commission is conducting hearings at Ocala, Fla., on the petition of this company to cease operations and discontinue the line. The road extends from Ocala, Fla., to Palatka, 54 miles. Officials of the company showed that the road is operating at a great loss, the deficit this year being over \$18,000.

**PENNSYLVANIA RAILROAD.**—The directors of the Pennsylvania Railroad Company and of the Pennsylvania Company have agreed, subject to the consent required from some of the state commissions, to transfer the leases and other operating agreements of the western lines, now held by the Pennsylvania Company, to the Pennsylvania Railroad Company. The latter company will then directly operate the lines now operated by the Pennsylvania Company, and the present experienced organization west of Pittsburgh, will continue to conduct the operations of the western lines, in the name of the Pennsylvania Railroad Company. The Pittsburgh, Cincinnati, Chicago & St. Louis Railroad Company is not included in the foregoing arrangement. All of the capital stock of the Pennsylvania Company is owned by the Pennsylvania Railroad Company, and all of its bonds are guaranteed by the latter company. Under the plan suggested, the capital stock of the Pennsylvania Company will ultimately be surrendered and cancelled, excepting such amount as may be deemed essential to preserve the charter of the Pennsylvania Company, until it is decided to dissolve it.

The Pennsylvania Company was incorporated under the laws of Pennsylvania in 1870, with the powers of a holding company as well as a railroad company, to take charge of the management and development for the Pennsylvania Railroad Company of the several lines west of Pittsburgh leased or owned by the latter company, notably the Pittsburgh, Ft. Wayne & Chicago, the Erie & Pittsburgh, the Cleveland & Pittsburgh and various other lines. Following the policy pursued by the Pennsylvania Railroad Company, the Pennsylvania Company is now to be taken over by the former company, to eliminate unnecessary duplication and to give its lines the additional strength and credit of the parent company, i. e., the Pennsylvania Railroad Company.

See also editorial elsewhere in this issue.

**WASHINGTON, POTOMAC & CHESAPEAKE.**—A petition has been filed in the Circuit Court at Hyattsville, Md., for the dissolution of the charter of this company, whose tracks extend from Brandywine, Md., to Mechanicsville, a distance of 21 miles.

## Railway Officers

### Executive, Financial, Legal and Accounting

J. P. Pelham has been appointed acting auditor of the Alabama Northern with office at Atlanta, Ga., vice W. E. Hix, resigned.

Charles H. Ewing, general manager of the Philadelphia & Reading, has been appointed vice-president, with headquarters at Philadelphia, Pa.

Announcement is made by the Pennsylvania Railroad that in connection with the change in the status of the lines of the northwest system (see Financial News) the vice-presidents, officers and employees of the Pennsylvania Company have been appointed to similar positions with the Pennsylvania Railroad Company, effective January 1, 1918, and will discharge the same duties as those now performed for the Pennsylvania Company in the management and operation of these western lines. The titles of the new vice-presidents are now as follows: J. J. Turner, senior vice-president, with general supervision over all departments of the western lines; E. B. Taylor, vice-president in charge of finance and accounting; D. T. McCabe, vice-president in charge of traffic; G. L. Peck, vice-president in charge of operation; Benjamin McKeen, vice-president in charge of real estate and purchases. They will continue to be located in the company's general office at Pittsburgh.

### Operating

J. B. Hutchinson, Jr., who has been appointed superintendent of the Tyrone division of the Pennsylvania Railroad, with headquarters at Tyrone, Pa., as has already been announced in these columns, was born on March 3, 1876, at Bristol, Pa., and was educated in Princeton University. While attending college he worked for the Pennsylvania Railroad during his summer vacations, and on January 1, 1898, was appointed rodman. In April, 1899, he was transferred to the office of the principal assistant engineer at Altoona, Pa., the following November he was made assistant supervisor on the West Penn division, and in 1900 he was transferred to the Pittsburgh division. He was promoted to supervisor on the West Penn division in 1901, and in 1905 was transferred to the Middle division in the same capacity. In January, 1910, he was appointed division engineer of the West Jersey & Seashore Railroad and three years later was transferred to the Williamsport and Susquehanna divisions of the Pennsylvania. He was appointed division engineer of the Monongahela division on February 11, 1914, and in September, 1916, was transferred to the Pittsburgh division in the same capacity. In April, 1917, he was promoted to assistant superintendent of the Pittsburgh division and on October 25 was made superintendent of the Tyrone division, as above noted.

W. T. Peyton has been appointed assistant general superintendent of the Fort Worth & Denver City and the Wichita Valley Railway, with office at Fort Worth, Texas.

E. L. Hill, an assistant in the engineering department of the Erie Railroad at New York, has been appointed assistant to general manager, with headquarters at New York.

J. C. Clark has been appointed assistant to the general manager of the Oregon Short Line, in charge of safety first work, with headquarters at Salt Lake City, Utah, effective November 26.



J. B. Hutchinson, Jr.

Homer Whitlock, train despatcher on the Peoria & Eastern division of the Cleveland, Cincinnati, Chicago & St. Louis, has been promoted to assistant trainmaster at Springfield, Ohio, succeeding H. B. Perry, who has enlisted in the army.

P. N. Place, superintendent of the Scranton division of the Delaware, Lackawanna & Western, with office at Scranton, Pa., has resigned, and F. J. Lawrence, trainmaster at Scranton, has been appointed acting superintendent, with headquarters at Scranton.

F. M. Falck, assistant general manager of the Philadelphia & Reading, has been appointed general manager, with headquarters at Philadelphia, Pa. A portrait of Mr. Falck and a sketch of his railway career were published in the *Railway Age Gazette* of April 20, 1917, page 857.

John Sesser, whose appointment as assistant general superintendent of the Great Northern, with headquarters at Great Falls, Mont. was mentioned in these columns on October 26, was born at St. Joseph, Mich., on August 20, 1873. He graduated from the civil engineering course at Lehigh University in 1896, and in the same year entered the employ of the Rolling Mills Company, Allentown, Pa., as a draftsman. From 1897 to 1898, he was instrument man and resident engineer on the Chicago & North Western, having charge of double-track work in Illinois, and resident engineer on the Union Pacific, in charge of heavy construction work in Wyoming; from 1899 to 1900 he was chief engineer of the Olad



J. Sesser

Plantation, Hilo, Hawaii; 1901 to 1902, resident engineer on the Chicago, Milwaukee & St. Paul, and for a short time during the latter part of this period chief engineer of the Iowa & St. Louis; 1902 to 1907, he was resident and locating engineer with the Chicago, Burlington & Quincy, locating and constructing a 60-mile extension from Centralia, Ill., to Herrin, and as engineer maintenance of way of the Missouri district. From 1907 to 1908 he was vice-president of the W. A. Kenly Company, Chicago. In December, 1909, he entered the service of the Great Northern as trainmaster, and in April, 1910, was promoted to assistant engineer maintenance of way of the system. In July, 1913, he was promoted to superintendent of the Kalispell division, with headquarters at Whitefish, Mont. In October, 1915, he was transferred to the Missabe-Superior division, with headquarters at Superior, Wis., which position he held until his appointment as assistant general superintendent, central district, effective October 20.

M. B. Lamb, assistant superintendent of the Chicago, Burlington & Quincy, with headquarters at Dayton's Bluff, Minn., has been promoted to superintendent, with headquarters at Hannibal, Mo., succeeding J. H. Aydelott, who has been transferred to Omaha, Neb., as superintendent of the Omaha division. G. L. Griggs, division superintendent at Omaha, Neb., has been transferred to the Alliance division, with headquarters at Alliance, Neb., succeeding W. M. Weidenhamer, resigned. O. C. Hibbs, trainmaster at Galesburg, Ill., has been promoted to assistant superintendent, with headquarters at Dayton's Bluff. The above changes were effective December 1.

#### Traffic

J. L. Bacon has been appointed commercial agent of the Central of Georgia, with office at Albany, Ga., vice W. F. Brown, promoted.

John S. Talbot has resigned as general traffic manager of the Evansville & Indianapolis and the office of general traffic manager has been discontinued.

F. A. Adams, chief clerk in the freight department of the Rock Island Lines at Fort Worth, Texas, has been appointed assistant general freight agent, with headquarters at Chicago.

E. J. Dowie, special agent in the industrial department of the New York Central, has been appointed industrial agent, with headquarters at Cleveland, Ohio, effective November 22.

W. E. Lowes, assistant general passenger agent of the Baltimore & Ohio, has been appointed general passenger agent of the system with headquarters at Baltimore, Md. He began railway work as a call boy and messenger in the superintendent's office of the Indianapolis & Vincennes, now a part of the Pittsburgh, Cincinnati, Chicago & St. Louis. He later served as telegraph operator and station agent of the Indianapolis, Cincinnati & Lafayette, now a part of the Cleveland, Cincinnati, Chicago & St. Louis. He was subsequently freight claim clerk and chief clerk of the freight department of the Pittsburgh, Cincinnati, Chicago & St. Louis at Indianapolis, Ind., and then became advertising agent of the Cleveland,



W. E. Lowes

Cincinnati, Chicago & St. Louis, at Cincinnati, Ohio. In 1897 he went to the Baltimore & Ohio as advertising manager and in 1910 he was made assistant general passenger agent, from which position he is now appointed general passenger agent of the Baltimore & Ohio system, as above noted.

W. T. LaMoure, general freight agent of the Boston & Maine, has been appointed freight traffic manager, with office at Boston, Mass., to succeed the late A. S. Crane. Mr. LaMoure was born at Worcester, N. Y., and was educated in the public school of his native town. He began railroad work in 1882, as a telegraph operator on the Boston, Hoosac Tunnel & Western, now a part of the Boston & Maine. In 1885 he was appointed station agent at Petersburgh Junction, N. Y. One year later he was transferred to Valley Falls, and then became agent at Johnsonville, when the Boston, Hoosac Tunnel & Western was consolidated with the Fitchburg Railroad. In 1892 he was appointed freight agent of the



W. T. LaMoure

Fitchburg Railroad, at Troy, N. Y.; three years later he was transferred to Boston as chief clerk of the local freight office, and two years later became local freight agent in charge of the Boston freight terminals of the Fitchburg Railroad, and continued in that position after the Fitchburg was leased to the Boston & Maine. In 1907 he was appointed foreign freight agent, and in January, 1914, was appointed assistant general freight agent of the Boston & Maine. In July, 1915, he became general freight agent, which position he held at the time of his appointment as freight traffic manager of the same road, as above noted.

R. S. Clark, commercial agent of the Tennessee Central, has been appointed assistant general freight agent, with office at Nashville, Tenn., and A. E. Yardley, commercial agent at St. Louis, Mo., has been appointed assistant general freight agent,

with office at Nashville, Tenn. The commercial agencies at Chicago, St. Louis, Mo., Atlanta, Ga., and Knoxville, Tenn., have been abolished.

Archibald Fries, freight traffic manager, eastern lines, of the Baltimore & Ohio, with headquarters at Baltimore, Md., has been appointed assistant general freight manager in charge of freight traffic of the system. He was born on February 27, 1864, and was educated in the public schools at Cincinnati, Ohio. He began railway work in 1880 as an entry clerk on the Ohio & Mississippi now a part of the Baltimore & Ohio System in the transfer station at Storr's, Ohio, and subsequently served consecutively as cashier and chief clerk at the same place. From January, 1890, to November, 1897, he was successively chief clerk, rate and claim clerk, accountant, chief clerk and acting manager of the Continental Fast Freight

Line; then to October, 1898, he was chief clerk in the general freight department of the Baltimore & Ohio Southwestern. In October, 1898, he was appointed general agent at Cincinnati, and in January, 1899, he became assistant general freight agent of the same road. From March, 1911, to January, 1913, he was also assistant general freight agent of the Cincinnati, Hamilton & Dayton. In January, 1913, he was appointed general freight agent of the Sharpsville Railroad; the same year he was appointed general freight agent of the Baltimore & Ohio at Pittsburgh, Pa., and on October 15, 1916, was appointed freight traffic manager of the eastern lines, with headquarters at Baltimore, and now becomes assistant general freight manager, as above noted.

Walter B. Calloway, general passenger agent, eastern lines, of the Baltimore & Ohio, with office at Baltimore, Md., has been appointed passenger traffic manager. He was born on December 28, 1873, at Harrison, Ohio, and was educated in the public schools at Home City, Ohio, also at Wabash College, Crawfordsville, Ind. He began railway work in September, 1891, as office boy in the freight claim department of the Cleveland, Cincinnati, Chicago & St. Louis, and subsequently served consecutively in various positions in the passenger department of the same road. He was then division clerk in the general passenger department of the Cincinnati, Hamilton & Dayton and later was chief rate clerk in the general passenger department of the same road. In January, 1901, he was appointed advertising manager of the same department and from June, 1902, to August of the following year, was assistant general passenger agent of the Cincinnati, Richmond & Muncie. He later served as general passenger agent of the Chicago, Cincinnati & Louisville, and from November, 1904, to December, 1905, he was assistant general passenger agent of the same road and the Cincinnati, Hamilton & Dayton. He was then to March, 1911, general passenger agent of the C. H. & D., and later served as assistant general passenger agent of the Baltimore & Ohio



A. Fries



W. B. Calloway

Southwestern and the C. H. & D. until September 1, 1911, when he was appointed general passenger agent of the same roads. In the fall of 1916 he was appointed general passenger agent of the Baltimore & Ohio, eastern lines, with headquarters at Baltimore, Md., and now becomes passenger traffic manager, as above noted.

O. P. McCarty, passenger traffic manager of the Baltimore & Ohio, with headquarters at Baltimore, Md., has been appointed general passenger representative, and Golden Shumate, assistant general freight agent, with headquarters at Baltimore, has been appointed general freight agent. A portrait of Mr. Shumate and a sketch of his railway career were published in the *Railway Age Gazette* of March 16, 1917, page 470.

#### Engineering and Rolling Stock

E. S. Pearce has been appointed mechanical engineer of the Cleveland, Cincinnati, Chicago & St. Louis, with headquarters at Beech Grove, Ind., succeeding W. E. Ricketson, promoted.

T. S. Davey, shop superintendent of the Erie at Buffalo (N. Y.) car shops, has been appointed master mechanic in charge of engine terminals at Croxton, N. J., and L. C. Fitzgerald, car foreman, succeeds Mr. Davey.

W. W. Lemen has been appointed superintendent of the motive power and car departments of the Denver & Rio Grande, with headquarters at Denver, Colo., vice W. J. Bennett, resigned, and W. O. Cook, general road foreman, has been appointed assistant superintendent motive power and car departments, with headquarters at Denver, Colo. (Burnham station). The office of general road foreman has been abolished, but the duties of the position have been assumed by Mr. Cook.

J. A. Delaney, master mechanic of the Rio Grande division of the Texas & Pacific, with headquarters at Alexandria, La., has been transferred to Big Spring, Tex. W. H. Keller, master mechanic at Big Spring, has been transferred to the Ft. Worth Division, with headquarters at Ft. Worth, Tex., relieving G. W. Deats, who has been appointed traveling supervisor of fuel and oil. W. L. McMurry, an engineer on the Ft. Worth division, has been appointed supervisor of fuel on the Rio Grande division, with headquarters at Big Spring, Tex.

R. E. Lee, acting manager of the mining and fuel department of the Chicago, Rock Island & Pacific, has been appointed manager of the mining department with jurisdiction over mines and mining operations, with headquarters at Chicago. The purchase, inspection and distribution of the company fuel will be under the jurisdiction of F. D. Reed, general purchasing agent. C. T. Winkless, superintendent of fuel, is transferred to the purchasing department, reporting to Mr. Reed. The conservation of fuel used in locomotives, stationary plants and pumping stations will be under the supervision of the mechanical department. The operation and maintenance of coal chutes will be under the jurisdiction of the transportation department and directly in charge of the division superintendent. The above reorganization became effective December 1.

#### Purchasing

H. M. Dewart has been appointed assistant purchasing agent of the Central Vermont, with office at St. Albans, Vt.

#### Railway Officers in Military Service

H. B. Perry, assistant trainmaster of the Cleveland, Cincinnati, Chicago & St. Louis at Springfield, Ohio, has enlisted in the army.

#### OBITUARY

David L. Middleton, commercial agent of the Lehigh Valley died from heart disease in his office in New York City on November 30.

Alexander S. Thweatt, general eastern passenger agent of the Southern Railway system, died on December 4, at his home in New York, at the age of 56.

Clinton White, former railroad commissioner of Massachusetts, died at his home in Melrose, Mass., November 25, at the age of 73. Mr. White was appointed a member of the railroad commission in 1901 and continued on that board, and its successor, the Public Service Commission, until 1915.